Published every Saturday by the Simmons-Boardman Publishing Company, 34 North Crystal Street, East Stroudsburg, Pa., with executive offices at 30 Church Street, New York

All communications should be addressed to the New York Office, 30 Church Street

EDWARD A. SIMMONS, *President*
LUCIUS B. SHERMAN, *Vice-Pres.*
HENRY LEE, *Vice-Pres.*
SAMUEL O. DUNN, *Vice-Pres.*
CECIL R. MILLS, *Vice-Pres.*
FREDERICK H. THOMPSON, *Vice-Pres.*
ROY V. WRIGHT, *Sec'y.*
JOHN T. DEMOTT, *Treas.*

CHICAGO:
105 West Adams St.

WASHINGTON:
17th and H Streets, N. W.

CLEVELAND:
Terminal Tower

SAN FRANCISCO:
215 Market St.

Editorial Staff

SAMUEL O. DUNN, *Editor*
ROY V. WRIGHT, *Managing Editor*
ELMER T. HOWSON, *Western Editor*
H. F. LANE, *Washington Editor*

B. B. ADAMS
C. B. PECK
W. S. LACHER
ALFRED G. OEHLER
F. W. KRAEGER
E. L. WOODWARD
J. G. LYNE
J. H. DUNN
D. A. STEEL
R. C. AUGUR
R. A. DOSTER
JOHN C. EMERY
MARION B. RICHARDSON
H. C. WILCOX
NEAL D. HOWARD
RICHARD W. BECKMAN
LLOYD GEORGE
CHARLES LAYNG
GEORGE E. BOYD
WALTER J. TAFT
GARDNER C. HUDSON
M. H. DICK
W. J. HARGEST

The Railway Age is a member of the Associated Business Papers (A. B. P.) and of the Audit Bureau of Circulations (A. B. C.)

Subscriptions, including 52 regular weekly issues and special daily editions published from time to time in New York, or in places other than New York, payable in advance and postage free; United States, Mexico and Canada, $6.00. Foreign countries, not including daily editions $8.00.

Subscriptions for the fourth issue each month only (published in two sections, the second of which is the Motor Transport Section) payable in advance and postage free; United States, Mexico and Canada, $1.00; foreign countries, $2.00. Single copies, 25 cents each.

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette and the Railway Age-Gazette. Name Registered U. S. Patent Office.

Vol. 89 December 20, 1930 No. 25

In this Issue

A "Close-Up" of Perishable Handling ..... Page 1306

An article describing methods used by the Missouri Pacific in expanding divisional operations to meet seasonal requirements of perishable traffic.

Electric Interlocking Speeds Traffic on 4.5-Mile Section of the P. & L. E. 1310

Tells how control of three interlocking layouts by one 38-lever machine is saving $87,450 and several thousand engine-crew hours annually.

Merchandising Message—All Employees Reached by Radio 1315

By the use of radio hook-ups, the Norfolk & Western increased the number of participants in its efficiency meetings to 4,200 employees, and has enabled many others to listen in.

EDITORIALS

Will the Commission Change Its Policy? 1303
What Car Loadings Show 1304
A Meritorious Bill to Stimulate Travel 1305

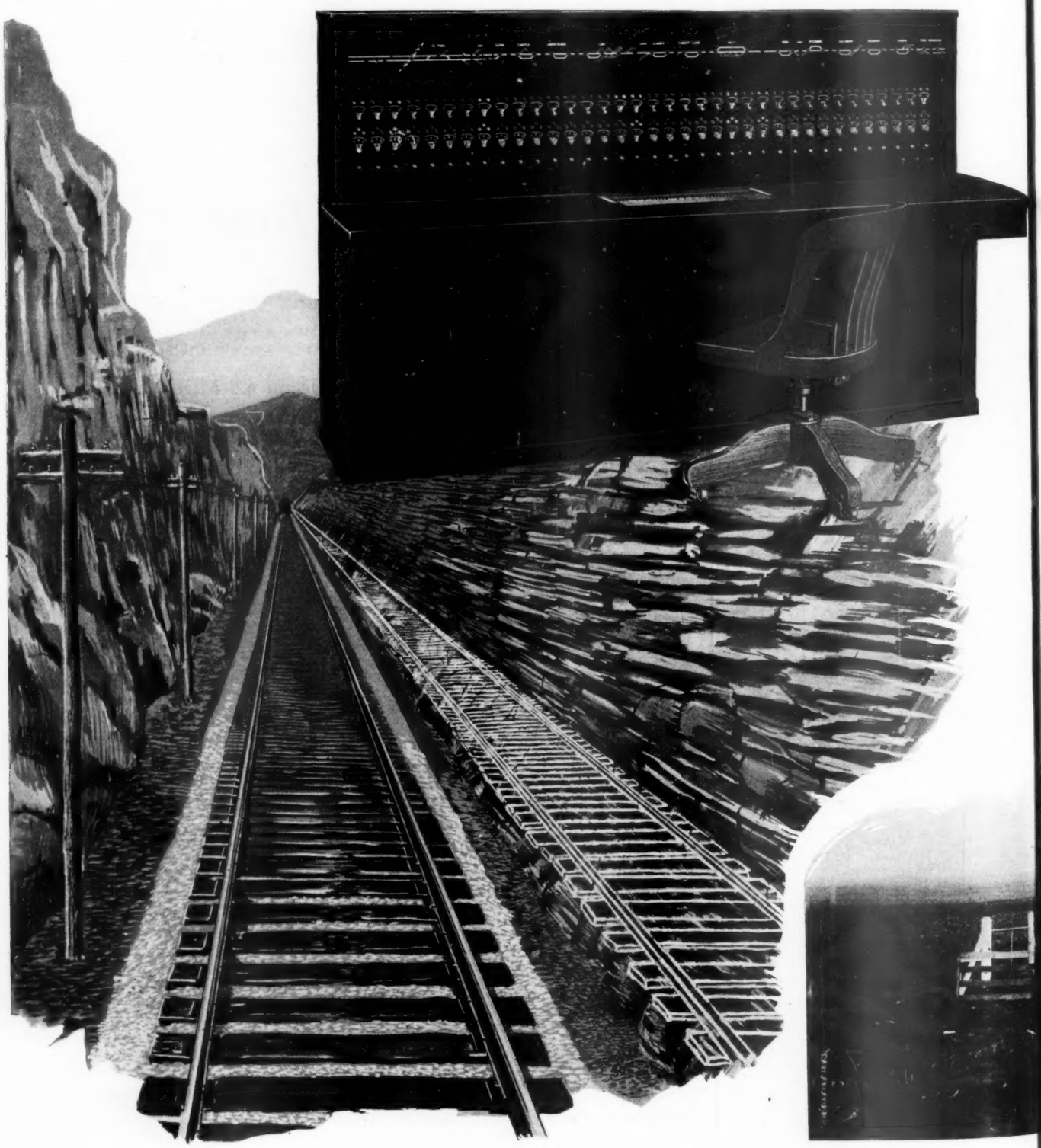
GENERAL ARTICLES

A "Close-Up" of Perishable Handling 1306
Safety Goal to be "33 x 33" 1309
Electric Interlocking Speeds Traffic on 4.5-Mile Section of the P. & L. E. 1310
Railroad Indebtedness to Federal Government 1313
I. C. C. to Investigate New Parcel Post Rates 1314
Merchandising Message—All Employees Reached by Radio 1315
Freight Car Loading 1317
Motor Transport Hearing Is Continued at Boston 1317
Let Railroad Men Manage the Railroads 1320
Water Conditioner Shows Savings on the Milwaukee 1321
New York I. C. C. Hearings Echo Packers' Power 1324
Remington Rand Offers Two New Filing Systems 1328
Annual Report of Bureau of Locomotive Inspection 1329
River and Canal Traffic Declined in 1929, by Harold F. Lane 1330
Chicago & Alton Bought For Baltimore & Ohio 1332
Doings of Bureau of Safety 1333
Asks Relief From Reparation Burden 1334
Railroads Rank High As Newspaper Advertisers 1335

COMMUNICATIONS AND BOOKS 1336
LOOKING BACKWARD 1337
ODDS AND ENDS OF RAILROADING 1338
NEWS 1339

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

Making Today's Rail



DISTRICT OFFICES:

NEW YORK MONTREAL CHICAGO ST. LOUIS SAN FRANCISCO

"COMFORTS" are tricky things. A railroad can spend millions in improved roadbed, better riding cars, windows that open and close with a touch, handsome carpets and beautiful car interiors, electric fans, automatic temperature control, porcelain wash basins and sanitary soap dispensers. All of these essential improvements contribute to traveling comfort and it is unfortunate that passengers pay so little attention to them.

But, even when they are installed in present equipment, the luxury of Hale & Kilburn rotating double chairs immediately arouses popular enthusiasm. Literally they make passengers

SIT DOWN AND TAKE NOTICE! . . . . .

HALE & KILBURN CO

General Office and Works:
1800 Lehigh Avenue, Philadelphia

SALES OFFICES:

Hale & Kilburn Co.	Graybar Bldg., New York
Hale & Kilburn Co.	McCormick Bldg., Chicago
Frank F. Bodler	903 Monadnock Bldg., San Francisco
E. A. Thornwell	Candler Bldg., Atlanta
W. L. Jefferies, Jr.	Mutual Bldg., Richmond
W. D. Jenkins	Praetorian Bldg., Dallas, Texas
H. M. Euler	53 First St., Portland, Ore.

"We see better times ahead for the Railroads"

A MESSAGE *from*
THE ELWELL-PARKER ELECTRIC CO.

As the monthly reports of earnings for the Fall come in, new throats are giving voice to the cry of "pity the poor railroads."

Of course 1930 has been a troublesome year. The railroads are having their difficulties. There is nothing new or startling in that. They have always had difficulties, some equally as serious as those with which they are now confronted. But they have always worked them out —to the ultimate benefit of their customers.

Container sections handled as easily as a 100 pound box.

How present ills, resulting from loss of freight traffic will be cured remains to be seen. Several remedies have been suggested and no one can question that the railroads have the ability to apply them. Witness the fact that gross ton-miles per train hour of freight service rendered was increased 35 per cent in five years, and that railroad earnings increased from about 4.33 per cent in 1923 to 4.84 per cent in 1929 on a substantially larger investment, and in spite of declining passenger traffic, lower freight rates, higher taxes and higher wages.

A management which can produce such a record as that certainly has the ability to cope with the present situation.

Appeals to public sentiment, railroad customers and government agencies can at best provide only partial and uncertain relief. We do not believe the railroads will depend upon such tactics.

Does not the real opportunity lie in further reductions in cost and improved service?

The Most Likely Solution

Of the economies that can still be made, none is so simple or so certain of success as the reduction of freight terminal operating expense.

The men in active charge of freight handling operations at the terminals have been quick to see the savings which can be made with power handling equipment. But too often money for the purchase of such equipment has not been provided, so that workmen at the freight terminals have been forced to continue to use their muscles instead of their brains.

With present equipment, it is costing the railroads about $2.40 to handle one ton of L. C. L. freight in, through and out of a busy freight house. It is estimated that present rates bring in revenue, averaging five cents per ton-mile. This means that a ton of L. C. L. freight must be carried over 48 miles of track to pay the handling cost of a single terminal. So long as such costs are involved, it is hard to see how railways can afford to offer improved service to L. C. L. shippers to meet the competition of the new carriers.

Simplifying freight handling methods, loading equipment to its maximum carrying capacity, speeding loading and unloading of cars and reducing labor expense will provide substantial and immediate reductions in operating costs. Not only will operating costs be reduced but the service rendered to shippers can be measurably improved.

Electric Trucks

Stores departments and shops have been given their chance to reduce costs with electric trucks. Their savings have been enormous. Isn't it time the freight terminals too, had their chance?

Wherever electric trucks have been used for freight handling their tremendous value has been proved.

At one terminal, a fleet of 28 trucks has returned its entire cost in 100 working days. Another fleet reduced

terminal operating costs $60,000 in one year, earning 150 per cent annual return on the investment. Such savings will go a long way toward making the handling of L. C. L. freight more profitable for the railways, and will justify them in vigorously cultivating this traffic by offering additional services such as store-door collection and delivery, which the competing carriers now offer.

Skid Platforms

Big savings can be made by using skid platforms both in freight transfer and in shipping. Many cases are on record where freight on skids has been loaded into a car or unloaded with electric trucks in one tenth to one twentieth of the time that present methods require.

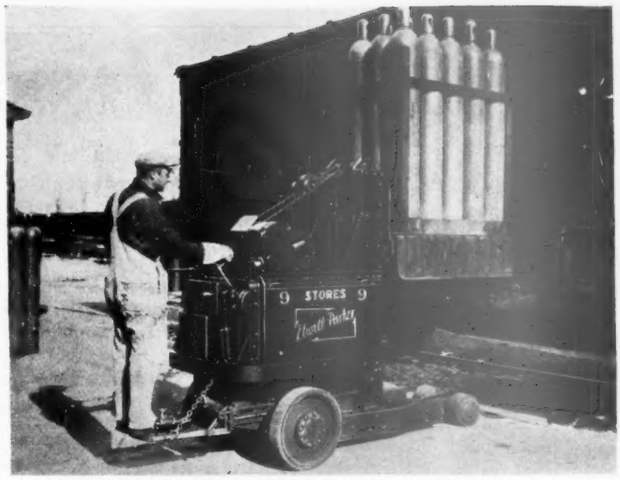
It is not difficult to visualize the day when *electric tiering trucks will be employed at small terminals to load and unload skidded L. C. L. shipments from track level, without "setting" the car.*

A committee of transportation men and shippers has estimated that the railroads could save $25,000,000 a year if skids were utilized to the full extent of their possibilities. Of the 20,000,000 carloads of miscellaneous freight moved every year by the railroads, 15 to 30 per cent can be shipped on skids. It is conservatively estimated that someone saves 50 cents to $1.00 every time a ton of goods is handled on skids instead of in small units. Savings on some commodities, which must be handled a dozen times or more in the course of distribution, would total from $6 to $10 per ton. A part of this saving would be made by customers of the railroad. And therein lies an opportunity for rendering a needed service. Skid shipping has been practiced long enough and in a sufficiently wide range of industries to establish its definite value. The time is ripe for railroads to merchandise it.

Containers

Seven years have passed since the first L. C. L. container was loaded on a car. The advantages and economies of the system have been repeatedly demonstrated. The consignee benefits from the system as well as the railroads.

One man delivers loaded skid of freight direct to position inside car.



How a stores department loads and unloads stores from track level

Waybilling costs for a container have been placed at approximately $17 less than the present cost of waybilling the same tonnage of separate L. C. L. shipments. Damage claims and pilferage are practically eliminated. Car loading jumps from around 10,000 lbs. to 42,000 and 60,000 lbs. Electric lift trucks have been developed to handle containers through the terminals in the same manner that a 100-lb. box would be handled—and at practically the same cost.

The Final Adjustment

In the final adjustment of freight traffic between railroads and other carriers, economic laws are certain to operate. Railroads will hold the business of those shippers whom they can serve most economically. Competing carriers will secure the remainder.

Already, figures have been released indicating that 30 per cent of the L. C. L. traffic has been lost to new carriers, If the final adjustment is to favor the railroads, *it is plain to see that prompt and decisive action must be taken at the freight terminals.*

After more than a quarter century of association with railroad officials and contact with railroad problems, we know that the necessary action *will* be taken. We believe that 1931 will see the beginning of an improved freight service that will bring to shippers a greater realization of the high purposes of the railroads as public servants.

THE ELWELL-PARKER ELECTRIC CO.
Cleveland

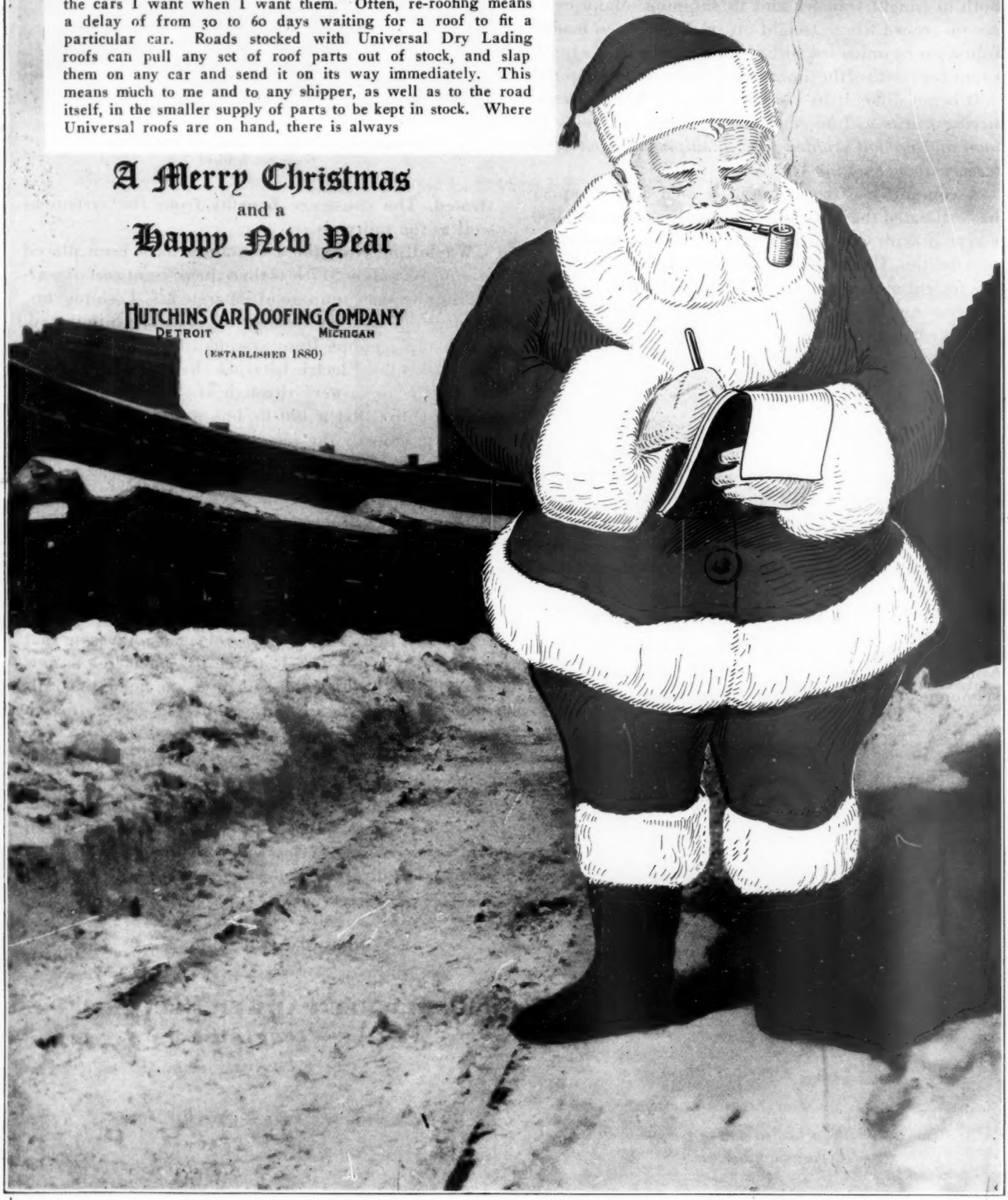
When Found, Make a Note

"If there's a hole in a' your roofs,
I rede ye tent it;
A chiel's amang ye takin' proofs,
An' faith, he'll prent it!"

AS a large shipper of costly merchandise which must reach its destination on time, or be practically valueless, I want the cars I want when I want them. Often, re-roofing means a delay of from 30 to 60 days waiting for a roof to fit a particular car. Roads stocked with Universal Dry Lading roofs can pull any set of roof parts out of stock, and slap them on any car and send it on its way immediately. This means much to me and to any shipper, as well as to the road itself, in the smaller supply of parts to be kept in stock. Where Universal roofs are on hand, there is always

A Merry Christmas
and a
Happy New Year

HUTCHINS CAR ROOFING COMPANY
DETROIT MICHIGAN
(ESTABLISHED 1880)



Railway Age

Vol. 89, No. 25 December 20, 1930

Table of Contents Appears on Page 5 of Advertising Section

Will the Commission Change Its Policy?

THE election of Ezra Brainerd, Jr., as chairman of the Interstate Commerce Commission calls attention to the rapidity with which changes recently have occurred in the commission's personnel. Mr. Brainerd rates as a "new" member, having been appointed less than four years ago; and yet there are five members who are his juniors in point of service. These are C. R. Porter and P. J. Farrell, appointed in 1928, and W. E. Lee, H. M. Tate and C. D. Mahaffie, appointed in 1930. These six members are a majority of the commission, and yet they have served on it an average of only two years, while three of them have served less than a year.

The other five members of the commision have served an average of 12 years each. They are Doctor B. H. Meyer, with a service record of 20 years; C. B. Aitchison, 13 years; J. B. Eastman, 11 years; E. I. Lewis, 9 years, and Frank McManamy, 7 years. Of these older members of the commission, only one is a lawyer, and he dissented on legal grounds from the commission's decision in the O'Fallon valuation case. All of the six members of the commission appointed within the last four years are lawyers, making the commission consist of four non-lawyers and seven lawyers.

It is an interesting question as to what changes in the commission's policy, if any, will result from the changing of a majority of its personnel within the last four years. Much the most influential member of the commission for some years has been Commissioner Eastman. Mr. Eastman has a pleasing personality, unusual ability, great industry and a Puritan conscience, but he is an advocate of government ownership of railways. It must be expected that a man having this combination of qualities and convictions will work constantly and ably for restrictive regulation of privately owned railroads. No man who believes in government ownership can be anxious for the success of private management and favor a policy of regulation that will help it to be successful. Mr. Eastman has worked constantly for the application of a policy of regulation which he knows is confiscatory under the decisions of the Supreme court, and under which he should know that private ownership of railways cannot be permanently maintained. He has been able in the past to secure the support of the commission for this policy.

Some of the ablest men on the commission, such as Henry C. Hall and Thomas F. Woodlock, who opposed him, have retired. The six new members of the commission and Mr. Aitchison know, as lawyers, however, that the policy regarding valuation, "rate bases" and regulation of rates which the commission has been following is unconstitutional and confiscatory. Will they disregard their legal training and knowledge and their reputations as lawyers, and support this policy?

An Economically Unsound Policy

The policy has proved equally unsound on purely economic principles. Although the railways never during the ten years the Transportation act has been in effect have earned the fair return the commission was directed by the act to allow them to earn, they did manage to earn enough until this year to improve their properties and service. With the coming of the business depression, however, and a much smaller decline of freight business than occurred in 1921, there has occurred so extreme a decline in net operating income that all but the strongest railways are being placed in financial jeopardy. During the last decade the railways have operated on a relatively much narrower margin of net return than before the war, and developments during the depression have demonstrated beyond question that they must be allowed to earn a larger percentage on property investment when business is good if the entire railroad industry is not to be menaced with disaster in periods of depression. Will the new members of the commission, both while the depression lasts and after it passes, recognize their plain duty to fix rates that will yield the railways larger returns, or will they disregard their responsibility for railway results as older members of the commission have?

The commission in its last annual report called attention to the way in which the traffic and earnings of the railways are being menaced by the competition of other means of transportation. The commission knows as well as anybody that the effectiveness of this competition is due to the subsidies being given by the government to other means of transportation, and to the difference between the way in which they and the railways are regulated. The commission is itself entirely responsible for the railways not being allowed to make rates that would enable them to meet water competition on the

Pacific coast, and to derive such earnings as they could from meeting that competition. Will the commission persist in denying to the railways the opportunity to meet this competition?

The commission must know it is unfair to the railways to leave unregulated the rates of intercoastal steamers using the Panama canal. It knows the unfairness and economic unwisdom of the government's present inland waterway policy. It knows how buses and trucks are cutting into even the long haul traffic of the railways, and what is enabling them to do so. The commission is charged by law with the duty of helping to maintain the railways in full strength and vigor in order that they may render good and adequate service. The commission, by telling the facts as it knows them, and advocating legislation to put the railways and their competitors on a basis of economic equality, could contribute much toward improving the present and prospective earnings and service of the railways.

What, then, will be the future policy of the commission? Will it continue to be such that railway rates will continue steadily to decline, or will it make a real effort to so regulate them as to help the railways earn the fair return to which they are lawfully entitled and which experience shows they need? Will the commission, as the nation's principal transportation regulating body, practically ignore the unfairness of the competition to which the railways are being subjected, or will it, in its decisions, reports and recommendations to Congress, tell the plain truth about it as one means of geting prevailing conditions and tendencies in the field of transportation corrected?

The Commission an Administrative Body

The commission is not merely a judicial body. It is also an administrative body. It is not merely its duty under the law to weigh the evidence in cases presented to it and decide them accordingly, but it is equally its duty to pursue a constructive policy for the purpose of helping the public to get good transportation service, and get it economically. While the rates of the railways are too low to enable them to earn a fair return, the country is not getting its transportation service now as economically as practicable; nor will it in future, if present tendencies continue to prevail. The means of transportation that are taking traffic from the railways are not taking it because they can handle it more economically, but because they are being inadequately regulated and helped by government subsidies. This diversion of traffic from the railways is, at the same time, so impairing their earnings as constantly to make it more probable that they will have to seek advances in rates if they are to be saved from financial disaster and enabled to continue to render good service. While the commission is trying to keep railway rates down, other government policies are tending to increase the aggregate cost of the total transportation service rendered to the public.

A majority of the present members of the commission owe their appointment to Presidents Coolidge and Hoover, both of whom have been strong advocates of fair government policies in dealing with business. May we not hope that their views will be given effect in the future policies of the Interstate Commerce Commission in dealing with the great railroad industry?

What Car Loadings Show

CAR loadings have been relatively smaller in October, November and December than in any other months during the prevailing depression, having, in fact, been smaller in these months than since 1921. Furthermore, the decline of car loadings has now continued longer than during the depression of 1921. The decline in the last depression began in December, 1920, and lasted for fourteen consecutive months, or through January, 1922. The first month of the present depression during which loadings showed a decline was October, 1929, and they had shown a decline for fourteen months at the end of November, 1930. In the first week of December, they were 16 per cent smaller than in December, 1929, and 20 per cent smaller than in December, 1928. Therefore, the present depression, measured by car loadings, already has lasted longer than that of 1921.

The depression of 1921 followed a period of five consecutive years of car shortages. While the freight car surplus in April, 1921, reached 507,000 cars, it steadily declined from that time on, and late in November was less than 70,000 cars. The depression of 1930 has followed a period of five years in which there were virtually no car shortages, and while the car surplus this year has never as yet exceeded 479,000 cars, it has never been less than 374,000, and at the end of October, when traffic usually attains its yearly peak, exceeded 400,000.

The great improvement which has been made in the distribution of freight cars during the last decade may be illustrated as well by statistics of years of depression as by statistics of years of active business. Because of faulty distribution, there were unfilled shipper's requisitions for cars in every week of 1921, and these reached a maximum of 11,219 in the last week of October. On the other hand, from the first week of November, 1929, to the end of the second week of November, 1930, there was never reported a single case of a shipper failing to be supplied with a car where and when he wanted it. In other words, in this period of more than a year the distribution of freight cars was 100 per cent perfect.

There has been a striking difference between the ways in which traffic declined in 1921 and 1930. The decline of car loadings in January, 1921, was almost 14 per cent and it never reached 19 per cent in any month and averaged 13 per cent throughout the year. On the other hand the decline reported in January, 1930, was only 6.2 per cent, but it steadily increased until for the eleven

months ending with November it averaged 13 per cent, or exactly the same as in the entire year 1921. The car loading figures do not, however, accurately reflect the declines in traffic in the two years, because there was a large decline in the average load per car in 1921 and there has been no corresponding decline this year. In the first nine months of 1921 the ton mileage of freight declined over 24 per cent, while in the first nine months of 1930 it declined only 13 per cent.

The present depression, as measured by the decline of railroad freight business, having now lasted longer than that of 1921, it might be assumed from past experience that it is nearing its end; but the numerous predictions made during the last year, that a turn for the better would soon come, having all proved unsound, few now have the hardihood to make further predictions.

A Meritorious Bill to Stimulate Travel

CONGRESSMAN L. C. Dyer of Missouri has introduced in the House of Representatives a bill, H. R. 11431, designed to stimulate travel in this country by foreigners. This bill deserves the support of railroad men—not only because it is designed to bring some additional passenger business, but also because of the probable favorable effect its passage would have on international amity and understanding.

The fact is that, whatever may be the general opinion in Europe, we are a hospitable people and we have much of interest to offer their tourists. The relatively few Europeans who come to us as tourists, once they surmount the barrier of petty officialdom which guards our visa offices abroad and our ports of entry here, realize this and their testimony in our behalf is of great value in the cultivation of friendly international relationships. The principal deterrent to building up a greater tourist traffic from Europe has been our official governmental attitude—consular and immigration departments have been geared up to handle immigration rather than tourist traffic. Their tendency too frequently is to regard applicants for entry in the light of supplicants rather than as customers. The Dyer bill is designed to change this official attitude by setting up a division in the Department of Commerce to "encourage, promote, and develop" travel by foreigners in the United States. And a change in the official point of view is precisely what is most needed. Witness the testimony of a prominent steamship officer:

> We are satisfied that a change in three existent factors would materially contribute to the ultimate success of the project. In order these are: (1) a more liberal attitude by consular officers to visa applicants; (2) extension of exempt head tax period from 60 days to 6 months, and, (3) reduced visa fees. In our opinion the first of the foregoing is, by far, the most important change necessary to accomplish the desired results.
>
> Our immigration laws provide for the unlimited admission of temporary visitors, but vest in consular officers, without right of appeal by the applicant, the determination of who is and what constitutes a visitor. The principle on which consuls discharge this duty is to deny visas to all who cannot establish clearly and beyond a doubt a genuine visitor status. Obviously this method must affect adversely many people of only moderate means or whose domestic relations and circumstances are not satisfactory to the administrator. We raise no question as to the integrity of the officials but we cannot escape the conclusion that their restrictive opinions and decisions towards many visitor applicants, communicated to others through the press, etc., have greatly affected and retarded the traffic in general. Consequently, we feel, that until the fear of rejection at the consulates or subsequent detention at Ellis Island is removed from the public mind abroad other efforts to stimulate and promote the movement under discussion will be considerably handicapped.
>
> The extension of the head tax period can be accomplished without legislation, as the Secretary of Labor is empowered to define the exempt limit. Not only would this change encourage tourist traffic, but it would serve to increase the time travelers might remain here. A reduction in visa fee could only be brought about by act of Congress as the charges are stipulated by law. We believe several measures on this account were introduced in the past but all failed of enactment.

The Dyer bill is plainly needed. Indeed, if there is any possible criticism of it to be offered, it is that it does not go far enough. Might it not be revised to state plainly that the official attitude of the United States is one of open-hearted hospitality to bona fide tourists, and that this fact should be called to the attention of all consular and immigration officers? Might it not further provide for the lowering of the visa fee to a nominal figure, or abolish it altogether? And might it not forbid the collection of a head tax from tourists for a sojourn of six months or even longer?

Such legislation would be a gesture of friendliness which would undoubtedly considerably enhance our reputation abroad. It would give the steamship lines a better balanced, and hence more profitable, trans-Atlantic traffic. It would help our hotels. And, finally, it would contribute to the passenger earnings of the railroads. Railroad men should lend their support to the measure and endeavor to interest others in its passage, making known their desires to their Congressmen.

* * *

Along the Baltimore & Ohio Near Harper's Ferry, W. Va.

The Joint Yard of the M. P.-D. & R. G. W. at Pueblo

A "Close-Up" of Perishable Handling

Expanding operations on a division of the Missouri Pacific to meet seasonal requirements

IN the series of articles that have appeared previously in the *Railway Age* describing perishable movements in various sections of the country, the entire scope of the operations from point of origin to destination has been taken into account. With the idea of illustrating in greater detail what steps must be taken on the individual division to handle perishable traffic efficiently, this article is concerned chiefly with the methods used on the Central Kansas-Colorado division of the M.P. This division supplies an unusually apt illustration, not only because of its excellent performance, but because it originates perishable traffic and also handles a large through perishable movement as well. Thus, two major problems are presented to its officers for solution, that of providing an adequate pick-up service and that of expediting the through movement. The efficiency of operation is indicated by the fact that the perishable schedule over this division has been reduced 12 hr. 25 min. in the last five years.

The Central Kansas-Colorado division comprises the line between Pueblo, Colo., and Kansas City, Mo., 622.5 miles, excluding the Kansas City terminals. It also includes 182.4 miles of branch lines. It is administered by a superintendent, with headquarters at Osawatomie, Kan., with an assistant at Pueblo, Colo., and trainmasters at Hoisington, Kas., and Osawatomie. For operating purposes, the main line is divided into five districts, as follows:

Kansas City-Osawatomie	57 miles
Osawatomie-Council Grove	90 miles
Council Grove-Hoisington	134 miles
Hoisington-Horace	172 miles
Horace-Pueblo	167 miles

Terminal Operations

Through perishable traffic is delivered to the Missouri Pacific by the Denver & Rio Grande Western at Pueblo, Colo., in blocks up to 90 cars each. The rating on this class of traffic east from this point is 3,000 tons. Any necessary fill-ins are obtained from the diversion track, from perishables loaded in the vicinity of Pueblo and from manifest freight. Except during the rush season, "red-ball" trains leave Pueblo daily for the East at 11:30 a.m. and 9:30 p.m., while, during the rush season, these manifest cars move as fillers on the perishable trains. In this manner, the regular freight not only serves to bring the perishable trains up to the proper tonnage, but also receives more frequent and faster service than would otherwise be the case.

The D. & R. G. W. trains pull into the Pueblo icing dock with all cars of perishables grouped at the rear end and manifest grouped immediately ahead. The perishables are cut off, spotted and iced and the D. & R. G. W. caboose is removed. In the meantime the M. P. has received advance telegraphic notice of the arrival. If fill-ins are necessary, they are prepared in advance and spotted adjacent to the icing dock, so that they may be added, together with an M. P. caboose, to make up a train while the through cars are being iced. In this manner, the trains are not delayed any longer than it takes to ice the through cars. A new icing dock has just been completed at Pueblo, where such records as 50 cars iced in 40 min., and 70 cars iced in 47 min. have been made.

Much of the economy and efficiency of operation is the result of the consolidation of the D. & R. G. W. and M. P. terminals at Pueblo, which took place on April 1, 1928. Comparative figures show that improved operating methods made possible by this consolidation have cut the terminal time at Pueblo approximately in half.

Road Operations

Prior to the rush season, the general superintendent of transportation issues a circular to all the divisions concerned in the handling, giving details as to the

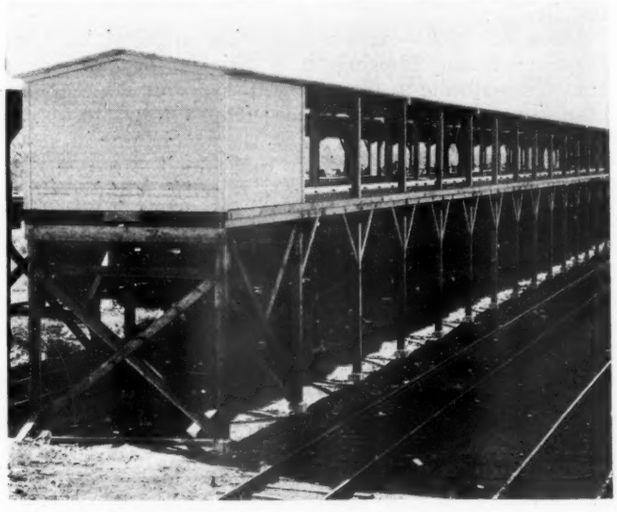
schedules it will be necessary to maintain to meet the requirements of the through schedule from California points to and through Chicago, St. Louis and Memphis. Details as to the schedules of perishables originating at intermediate points are also given, so that each division is informed as to its expected performance. The Central Kansas-Colorado division is allowed 23 hr. 35 min. between Pueblo and Kansas City, 622.5 miles, with the necessity of bettering this schedule by as much as two hours, if the trains are delivered late by connections.

The perishable trains are run extra with rights over all but first-class trains. Three passenger trains in each direction are operated over the entire main line of this division daily, and the perishable schedules are arranged as carefully as possible so as to avoid the necessity of delaying the fruit blocks for these six first-class trains.

In accordance with the maintracking system on the M. P., the "short" loads are placed at the rear of the trains, while switching at Pueblo, so that the switching at destinations is reduced to a minimum. The extended engine run plan, described in the *Railway Age* of October 6, 1928, has materially aided the operations at the intermediate terminal at Horace, at which point perishable trains are now handled on the main track. The engine is not cut off the train, and the car men conduct their inspection while the engine is taking water and coal. The crews are called and ready to take over the train at once. In this connection, a campaign of education has been conducted among the firemen to insure their leaving the locomotive with the fire in good condition. This is an important feature and must be carefully supervised if extended engine runs are to be successful. It means the breaking up of the old habit of letting the fire die down upon approaching the terminal. Experience, supplemented by supervision and education, has resulted in the elimination of this attitude on the part of the firemen.

Car Inspection

On this, as on other roads handling the fast trains required for perishable movements, the matter of car inspection is an important item. On this division, every employee is, in a sense, a car inspector. The trainmen make several inspections while en route. They go over the train at each water stop, so that the cars receive this type of inspection about once in each



Icing Dock Constructed This Year at Pueblo

Packing and Loading Cantaloupes at Ordway, Colo.

70 miles. The operator at each telegraph office must be out on the platform as each perishable train passes, looking over the cars as they go by and signaling the crew or telegraphing ahead if anything is found to be wrong. As these trains pass each section or extra gang, the men divide so as to be able to look over both sides of the trains. Pumpers at water stations where the train does not stop also look them over. In fact, every officer and employee on the division, whether on duty or not, keeps an eye on the perishable trains as they pass.

This large and efficient volunteer inspection force serves as excellent purpose, both from the standpoint of preventing accidents and by increasing the confidence of the trainmen and the dispatchers.

Producing Territory Operations

As may be seen from the detailed estimate given in the table, there is a considerable perishable movement originating on the Colorado division, all of which is the product of agricultural development in the territory within the past few years. There is a constant flow of empties westward for delivery to connections for use in the through movement, and the empties for the Ordway district are handled in these trains. They

Estimate—1930 Crop

Commodity	Acres	Carloads
Pueblo District		
Cabbage	430	305
Cauliflower	1,535	997
Carrots	313	192
Broccoli	153	80
Onions	371	290
Cantaloupes	671	380
Mixed vegetables	600	225
Ordway District		
Cantaloupes	4,495	2,000
Onions	244	200
		4,669

are cut out at Ordway and distributed to the fields for loading by switching locals, which also pick up the loads. Such a train leaves the west end of the producing territory at 9 p.m. Each loading shed has a regular closing hour, based on the movement of this train, which arrives at Ordway, the concentration point, at 11 p.m. During the rush season, these cars are iced and leave Ordway as a solid train of perishables at 2 a.m. A modern icing station was built at Ordway last year to accommodate this rapidly growing movement.

At the beginning and end of the season when there is not sufficient traffic for a full train, the cars from the Ordway territory are picked up by a train loaded with mixed vegetables, from southern Colorado points on the D. & R. G. W.

Switching engines are put on in the Ordway district as soon as the shipping season opens, although only a few cars may be handled at first. When not otherwise engaged at the start of the season, these engines make all possible advance preparations for the rush, and also aid the movement of the local freight train by performing all the necessary switching.

There is also a local movement of sugar beets amounting to about 60 cars per day, which coincides with the rush season. These beets are handled from the fields to factories at Sugar City, Colo., in high-side, center-dump, self-clearing coal cars. This movement lasts from September 25 to December 15, and is handled by switching locals, the special equipment necessary being used in shuttle service between the fields and the factory. The beets are loaded from tipples and unloaded into vats directly from the cars, which are run on to a dock at the factory.

Recruiting Men

When the heavy traffic is not moving, from 7 to 8 "chain-gang" crews are employed on each of the two districts between Hoisington and Pueblo. A somewhat unusual situation exists at this time in that practically all of the regular firemen are qualified and experienced enginemen and, similarly, the regular brakemen are nearly all experienced conductors. In the rush season, this assignment is increased to 18 or 19 crews on each district.

Separate seniority lists are maintained for the Central Kansas and the Colorado sections of the division, and the regular firemen and brakemen on the Colorado section, of course, bid in the jobs as enginemen and conductors as they open up on their section. Their places are filled by firemen and brakemen who are on the extra boards of other divisions. This migration is principally from the Arkansas, Little Rock and Louisiana divisions, since the period of light business on these divisions practically coincides with the heavy perishable movement.

Telegraph operators are recruited from the station helpers, supplemented by some operators from other divisions. The Colorado section is fortunate in that the climate at the time of the heaviest movement is usually excellent, and this, together with the healthy, dry air on the high Colorado and western Kansas plateau, attracts many competent and efficient men who would not otherwise be available.

The chief feature of this plan is the fact that the extra employees secured during the rush period are not outsiders, unamenable to discipline and destructive to morale, but are Missouri Pacific employees.

Improved Facilities

The metamorphosis from a railroad handling some drag freight and wheat, to a high speed through perishable line, has been accomplished by interesting physical changes. The Colorado section, for example, has been completely reballasted with slag, and the entire 338 miles was relaid with 90-lb. rail, replacing 85-lb. rail which had been in service since 1906. This was accomplished as a three-year program, and completed during the past summer. A three-mile stretch of second main track has been laid to relieve the congestion just outside Pueblo. Fourteen passing tracks have also been lengthened to 90-car capacity on this section.

The Central Kansas section traverses country entirely different in topography than the Colorado section. The high plateau of eastern Colorado and western Kansas gives way to the rolling country of central and eastern Kansas, and, in place of long stretches of straight track (there are tangents as long as 54 miles on the Colorado section), the broken country requires many curves. Similarly, instead of the steady descent of some 4,000 ft. from Pueblo into Hoisington, the grade-line becomes broken.

To overcome the handicaps to operation imposed by these physical features, an important program of line revision and relocation has been undertaken, for the purpose of eliminating curves and reducing grades. This work is now approaching completion, several short sections of new line having already been turned over to the operating department. This construction involves 13 separate projects, the largest two of which involving 32.2 and 16.0 miles of new lines, respectively. When the program is completed, 77.8 miles of new line, with improved gradients and curvature, will have been built. Much "dependable main line" work has been done in connection with this construction, consisting of building stone bulwarks at all places which experience has shown to be subject to washouts.

To provide for the longer trains now being operated, 21 passing sidings on the Central Kansas main line have been lengthened from their previous capacities of from 63 to 80 cars to a standard of 100-car capacity.

Operation by Signal Indication

Between Leeds, Mo., just outside of Kansas City, and Osawatomie, Kan., 49.9 miles, trains are operated over the single-track line under signal indication only, between Leeds and Wagstaff by the operators under orders of the dispatcher, and between Wagstaff and Osawatomie under direct control of the dispatcher. This operation, and the benefits accruing therefrom, have been described in detail in the *Railway Age*. One of the recent developments, however, has resulted in the elimination of many train stops. Formerly, all freight trains entering the yard at Osawatomie had to stop and line up two switches. Under the dispatcher control, 98 per cent of these trains now head into the yard against the current of traffic without stopping, a horn, controlled by the dispatcher, being provided on the lead to warn yard engines working there, as an additional safety precaution. At the west end of the yard, a remote control switch has been installed to facilitate entry into the yard, which is further aided by a board on which the track number is flashed in electric lights for the information of the crews. A similar remote control switch has been installed at Red Bridge.

Automatic block signals are being installed between Osawatomie and Hoisington, a distance of 224 miles; from Osawatomie to Ottawa, a distance of 20.99 miles, these signals are now is service; from Ottawa to Osage City, a distance of 32.33 miles, they were put in service September 30; Osage City to Council Grove, a distance of 38.13 miles, by November 16; from Council Grove west to Hoisington, the installation will be made in 1931.

On the Colorado division, signals were also constructed between Pueblo and Sugar City, 55.6 miles, and between McCracken and Hoisington, a distance of 46.48 miles, and placed in service this year.

The dispatching plan has been changed on the Colorado section, and a second telephone dispatching circuit between Pueblo and Horace has been placed in service this year to supplement the existing circuit between Hoisington and Pueblo. Until this year, one set of dispatchers at Hoisington dispatched by telephone, an additional set of dispatchers, using the telegraph line, being

put on at Pueblo during the fruit season. All dispatching on the Colorado division is now done from Pueblo and the telephone is used entirely.

The Missouri Pacific has paralleled the change in character of this division with changed operating methods, and with improved facilities, so that, in the last seven years, the Central Kansas-Colorado division has grown from a secondary main line, handling light, and principally local, business, to a highly important through traffic artery with ample capacity to handle the movement speedily and dependably.

Safety Goal to be "33 by 33"

A NEW goal calling for the reduction of 33 per cent in casualties among employees of railroads by December 31, 1933, was announced at the regional meeting of the Safety Section of the American Railway Association, held at Chicago on December 8 and presided over by Chairman Frank E. Strouse, special representative of the general manager of the Pennsylvania. The new goal was promulgated by H. A. Rowe, chairman of the Safety Section and claims attorney for the Delaware, Lackawanna & Western, who spoke on the year's work. Mr. Rowe said that the new campaign will commence on January 1, 1931, and will terminate on December 31, 1933, a three-year contest to round out the ten-year period which succeeds previous decades where the reduction in casualties averaged better than 10 per cent a year. The new goal, which may be abbreviated to "33 by 33" and which amounts to a reduction of 11 per cent a year, was approved unanimously by a rising vote.

The meeting at Chicago was the second of a series of safety meetings to be held throughout the country, the first meeting being held at Montreal. The program, which was arranged by Chairman Strouse, differed from most safety meetings in that in addition to the usual prepared speeches, a portion of the time was allotted to a general discussion in which only employees other than safety agents could participate, and a short playlet, entitled "The Hard-Boiled Foreman and the Safety Agent" acted by two Pennsylvania employees, who instructively portrayed the conversion of a hard-boiled foreman to an earnest safety worker.

At a luncheon, S. H. Cady, general solicitor of the Chicago & North Western, gave an interesting address on railroad competition. He portrayed the danger of water competition by asking the audience to picture the predicament of the Illinois Central if a railroad were constructed parallel to it with government money and operated with rates equal to one-half of those charged on the Illinois Central. He further emphasized the unfairness of water transportation by adding to this picture another one whereby the Chicago, Milwaukee, St. Paul & Pacific would have to route its traffic over the imagined line with rates which would be so low that the amount received by the Milwaukee would not cover the cost of transportation on that road.

Among the instructive addresses was that of G. H. Warfel, assistant to the general manager of the Union Pacific, who spoke on "Practical Safety in the Maintenance of Way Department," and who described in detail many of the problems of promoting safety among maintenance of way men. "These men," he said, "are the hardest to reach with safety instructions because they are scattered in small groups or singly all over the property. Thev do not come into common terminals like train and engine men, nor work in large groups at centralized points like the shopmen. They constitute, roughly, one-third of the working force of the railroad, about one-third of the fatalities, and about one-fourth of the injuries. They have a higher number killed and injured per million man hours, than any general group except train and enginemen. There are many clever, capable and intelligent men in this department, and their supervisors are as resourceful and competent as will be found in industrial work anywhere. The men in about three-fifths of this group present a very difficult problem in the safety educational field."

E. G. Evans, superintendent of safety of the Louisville & Nashville, spoke on the relationship of highway crossing accidents to the nation's traffic mortality toll, saying that available data do not indicate the need for added and costly protective measures advocated by the National Council of Street and Highway Safety, which says there are many points of similarity between the problems of railway grade crossings and those of highway intersections, but the extra hazards of grade crossings call for additional protective measures. According to Mr. Evans, only 8.7 per cent of the estimated total of 31,000 traffic fatalities during 1929, occurred at the highway crossings of steam railroads while considerably more than 50 per cent of the total occurred at highway intersections.

"The solution of the traffic problem lies in the hands of the public, for it is at highway intersections that 35 per cent of the accidents, which last year caused 31,000 fatal injuries, occurred, and it is the public on foot and in automobiles who were involved. Not until the public properly conducts itself at highway intersections will traffic fatalities cease."

Others who spoke at the meeting were L. F. Shedd, superintendent of safety of the Chicago, Rock Island & Pacific, T. H. Carrow, superintendent of safety of the Pennsylvania, D. G. Phillips, superintendent of safety of the Wabash, C. E. Hill, general safety agent of the New York Central, J. A. Carney, superintendent of safety of the Chicago, Burlington & Quincy, M. J. Flanigan, manager of the safety department of the Chicago, Milwaukee, St. Paul & Pacific, E. E. Seyfarth, supervisor of safety and personnel of the Belt Railway of Chicago, and T. R. McCampbell, of the Cleveland, Cincinnati, Chicago & St. Louis

* * *

Main Entrance and Fifth Avenue Window of the Canadian National's New Ticket Offices in New York City

Electric Interlocking Speeds Traffic

Installation permits reduction of 742 road-crew and 5,445 yard-engine-crew hours annually— Yearly net saving estimated at $87,450

The Illuminated Track Diagram and Section

AN electric interlocking plant, which extends for 4.5 miles between distant signals and about 3 miles between the most remote home signals, has been installed by the Pittsburgh & Lake Erie at Beck's Run, Pa., near Pittsburgh. By reason of reductions in train and yard engine hours, and in the number of operators, this interlocking is effecting an annual saving of $87,450, which represents a return of 90 per cent on the investment, not including interest charges. The interlocking apparatus, which includes unique circuits developed on this plant, was furnished by the Union Switch & Signal Company and was installed by the P. & L. E. signal construction forces.

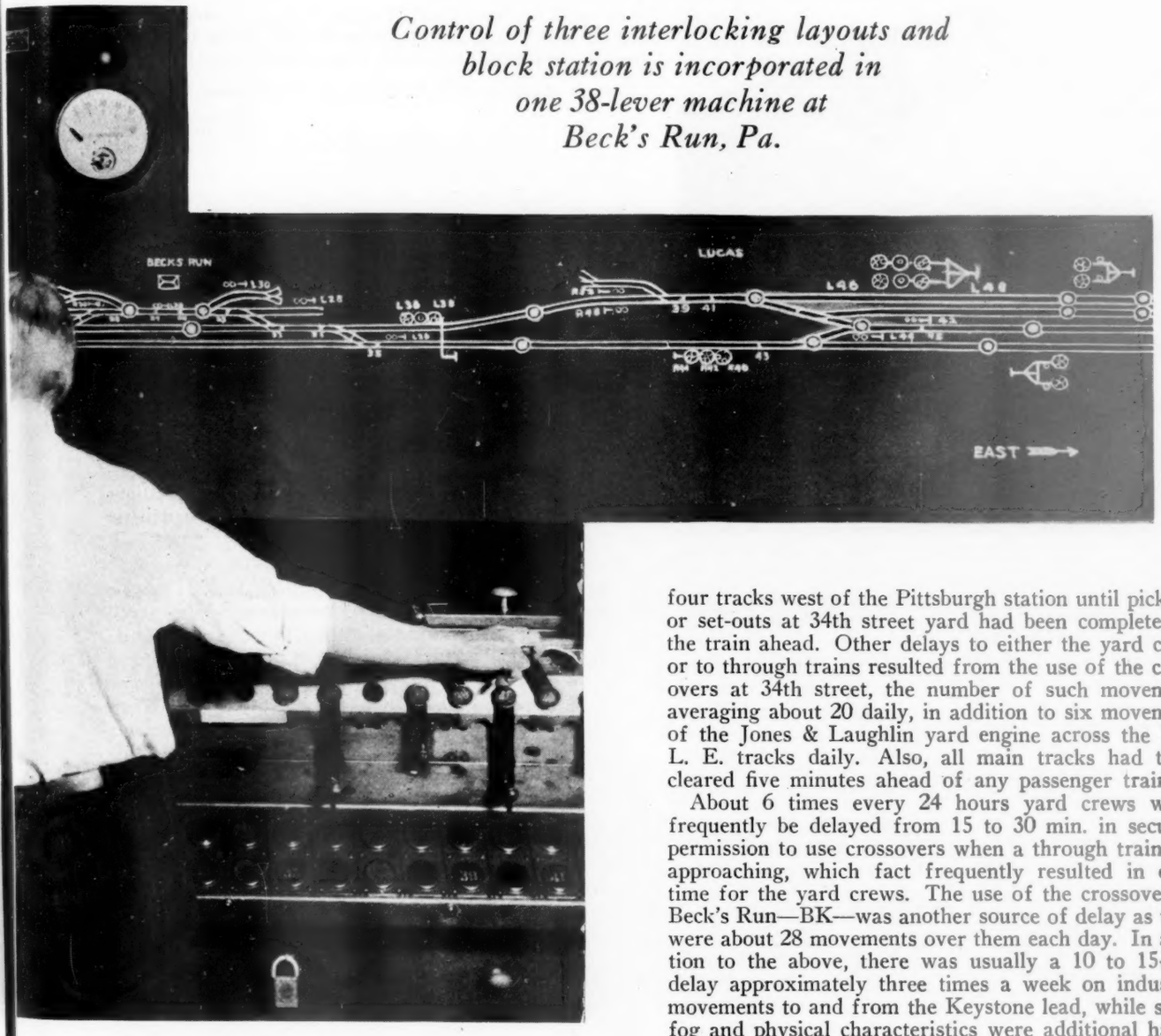
The new plant, controlled from one interlocking machine in Beck's Run tower, combines with the interlocking at Beck's Run the control of two interlocking layouts which were formerly in operation at 34th street and at Lucas, as well as a block station at 22nd street. The plant is, therefore, logically divided into three distinct sections. The first of these sections known as Beck's Run, includes the 5 crossovers, 2 single switches and the 14 signals located in the immediate vicinity of the tower. The second section of the plant at Lucas, includes one crossover and 3 single switches with 11 signals, the nearest home signal of this group being 5,500 ft. east of the tower. The third section of the plant consists of 3 crossovers and 10 signals in the vicinity of 34th street, the nearest home signal of this group being 4,200 ft. west of the tower.

Because of the length of this territory, it was necessary to give special consideration to the problems of operating the switches and signals in the outlying groups. A Model-14 interlocking machine was chosen because of being adaptable to the use of the special circuits required for the control and indication of these outlying functions, as well as the main plant at Beck's Run. This machine has 38 working levers and 17 spare spaces. A maximum of two conflicting signals are controlled by each signal lever. Each switch lever controls either a single switch or, in the case of a crossover layout, both switches in tandem.

The Beck's Run layout is operated as a standard Type-F high-voltage plant using 110-volt d-c. Type M-2 switch movements, the Type-F controllers and circuits. However, the two outlying sections, at Lucas and at 34th street, have a form of remote control which is based on the principle of operating a switch control unit which, in turn, governs a local circuit at the switch, the latter circuit carrying the heavy switch-operating current. The unique feature of this circuit as applied here is that both the control and the indication of a switch, or, in the case of a crossover, a pair of switches, are accomplished with only two wires. This feature was made possible here by the use of a-c. switch movements and a-c. switch controllers with d-c. switch indication circuits superimposed thereon. So little energy is transmitted over this pair of wires for the operation of the a-c. control unit and the d-c. indication relay

on 4.5-Mile Section of the P.& L.E.

Control of three interlocking layouts and block station is incorporated in one 38-lever machine at Beck's Run, Pa.



of Interlocking Machine in Beck's Run Tower

that mechanical strength was the only governing factor in calculating the size of wire that was required for this circuit. This feature alone was responsible for effecting a large saving on wire.

Prior Operation

Under normal conditions about 60 trains are operated daily through this plant, most of them being tonnage trains. Prior to the installation of the interlocking plant, the yard at 34th street was an "island" yard with the two eastbound main tracks passing on one side and the two westbound main tracks on the other side. The line parallels the west bank of the Monongahela river, which, with industrial plants on the other side of the right of way, limited the space available for expansion.

Under the former system of operation, it was necessary at times to hold eastbound through trains on the four tracks west of the Pittsburgh station until pick-ups or set-outs at 34th street yard had been completed by the train ahead. Other delays to either the yard crews or to through trains resulted from the use of the crossovers at 34th street, the number of such movements averaging about 20 daily, in addition to six movements of the Jones & Laughlin yard engine across the P. & L. E. tracks daily. Also, all main tracks had to be cleared five minutes ahead of any passenger train.

About 6 times every 24 hours yard crews would frequently be delayed from 15 to 30 min. in securing permission to use crossovers when a through train was approaching, which fact frequently resulted in overtime for the yard crews. The use of the crossovers at Beck's Run—BK—was another source of delay as there were about 28 movements over them each day. In addition to the above, there was usually a 10 to 15-min. delay approximately three times a week on industrial movements to and from the Keystone lead, while snow, fog and physical characteristics were additional handicaps to operation in this district.

Whenever it was necessary for a yard engine or a through train to use the main line crossovers in this territory, a delay, on a conservative estimate of 10 min., was experienced. This delay resulted from the observance of the rule that "A train or engine desiring to come out on to a main track through any switch or crossover in the territory controlled by automatic block signals must open all switches to be used (which will place the signals concerned in the 'stop' position), and then wait two minutes before proceeding, prepared to close the switches, to protect a train which may have passed the signal before the switches were opened." In addition to the delay it was necessary to send out flagmen in both directions.

Present Operation

In studying plans for eliminating the congestion in Pittsburgh and for providing more flexible operation and yard room, it was decided that the traffic could be

View Looking West With Tower at Right

handled on two tracks, instead of on four as formerly, and the installation made along these lines has proved successful. Trains are now operated entirely on signal indication throughout the limits of this interlocking, running in either direction on either track, and thus eliminating many delays. For example, a train with set-outs can operate on the westbound track while through trains can run around it on the eastbound track, or vice versa. If necessary, a train may be passed around the yard on the yard-running track.

Another complication arose from the fact that, since it is necessary to keep the 22nd street highway crossing open, trains of 45 cars or more must be held back at this point. Before passing automatic signal No. 10 at 19th street, when that signal is in the stop or approach position, a member of the crew must call the towerman at BK by telephone.

Two signals, governing the entrance to the Jones & Laughlin tunnel, are located 8,000 ft. west of the tower and immediately east of 22nd street. If a train is to enter the yard a "yellow" over "red" over "green" aspect is displayed by signal R2-R4; this indicates "proceed prepared to pass next signal at restricted speed." At signal R9-R11 the aspect of "red" over "red" over "yellow" permits the train to enter the yard at restricted speed.

Summary

A survey shows that on a conservative estimate, the following delay time has been saved:

30 min. each by two through trains daily.
20 min. each daily by two road crews setting out and picking up.
10 min. per crossover move at 34th street. (Approximately 20 moves in 24 hours).
15 min. per crossover move at BK. (Approximately 28 moves in 24 hours).
15 min. by yard crews formerly delayed because of the approach of through freights. (Approximately six times daily).
15 min. by tonnage trains entering yard.

The increased flexibility of operation has resulted in the yard engines being used for switching service seven hours instead of eight at Beck's Run. This results in a saving of three hours each day at Beck's Run, which time is used elsewhere. In addition, tangible savings result from a more even flow of traffic over the division, fewer stops of tonnage trains with reduction in wear and tear of equipment, more flexible operation at Lucas, etc. A tabulation of the tangible savings appears in Table 1 and the economic aspects appear in Table 2.

Communication System

To add to the flexibility of operation at Beck's Run and to avoid unnecessary train delays, ample telephone service has been provided throughout this territory,

Table 1—Tabulation of the Time Saved

Trains	Minutes Per Day	Hours Per Year
1. Road crews setting out and picking up at 34th st.	40	
2. Through trains held back account (1)	60	
3. Through trains entering yard	22	
Total	122	742
4. Yard engine delays at 34th street crossovers	200	
5. Yard engine delays at "BK" crossovers	420	
6. Yard engines waiting on through trains	90	
7. Yard engines working shorter time	180	
8. Yard engines working Keystone lead	5	
Total	895	5,445

twelve telephones being located within the limits of this interlocking plant. At six of these locations, it is possible for the yard or train crews to get in direct communication with the dispatcher or with Beck's Run tower, while the other six locations afford direct communication with the tower.

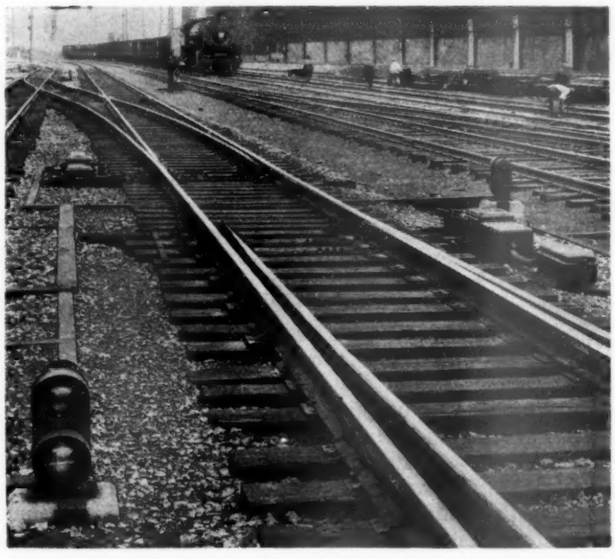
In addition to this means of communication, provision has been made also for the operator at BK to get in touch with the maintainer by means of an air whistle

Table 2—Economic Aspects

	Credit	Debit	
A. First cost			$96,343
B. Annual operation (as compared with former arrangement)			
1. Increased maintenance and repair, labor and material, etc.		$3,000	
2. Savings made.			
a. Through train hours, 742 at $15.00	$11,130		
b. Yard engine hours, 5,445 at $12.50	68,063		
c. Closing two offices	11,257		
Total	$90,450		
3. Annual savings	87,450		
C. Return on investment (not including interest charges) per cent			90.7

at the tower and electric horns at 34th street and at Lucas. Through the use of these facilities, it is possible for the operator in the tower, by means of a private code, to give the maintainer ample warning as to the approach of trains, thereby preventing any delay that might be caused by maintenance work.

In the tower a loud speaker, which is connected across



Dwarf Signal and Switch Machine Near West End of Plant

the dispatcher's telephone line, enables the operator to keep in touch with instructions issued by the dispatcher. In addition to the telephone on the operator's desk, there is also a transmitter in front of the interlocking machine, so arranged that the operator may converse with the dispatcher or trainmen while he is operating the machine.

Railroad Indebtedness to Federal Government

WASHINGTON, D. C.

A RECOMMENDATION that legislation be enacted authorizing the Secretary of the Treasury, with the concurrence of the Interstate Commerce Commission, to compromise claims or to co-operate in connection with any reorganization plan or to make such other arrangements as he may deem for the best interests of the United States for the repayment of the indebtedness to the government of carriers incurred under sections 209 and 210 of the transportation act, is included in the annual report of Secretary Mellon. He also recommends a reduction from 6 per cent to not less than 3½ per cent in the interest paid where this will assist in avoiding receiverships.

Secretary Mellon points out that under the provisions of the federal control act, and of the transportation act, 1920, the government acquired obligations of railroads in the aggregate principal amount of over $985,000,000, bearing interest at 6 per cent. The carriers have repaid over $930,000,000 of this amount, leaving a balance due as of June 30, 1930, of about $55,000,000. In addition, the carriers have paid to the government as interest on these obligations the sum of about $209,000,000.

"Of the $55,000,000 principal amount of obligations of carriers still held by the government, about 50 per cent will probably be collected in full," the report says. "The financial condition of the carriers obligated on the remainder indicates that the government may not be able to collect the full amount due. Some of these carriers are already in receivership. Since, with regard to the obligations acquired under section 210 of the transportation act, the government is unable to make any adjustments either in principal or in interest due on them from the embarrassed carriers, the difficulties in readjusting the carriers' finances are greatly increased and in some cases reorganization plans are frustrated. With respect to the carriers in receivership it is believed that the government should be in a position to co-operate fully with the receivers, bondholders' committees and others in any reorganization plan which may be approved by the court having jurisdiction. If the government is not permitted to carry its share of the burdens which must be borne by all the security holders in a reorganization plan, the difficulties and delays resulting therefrom will not only impair the value of the government's claim but will also jeopardize the service which the carrier can render the public. In addition to the government's being in the position of preventing a reorganization, it will be forced to share with other security holders in the liquidating value obtained at a forced sale of the properties. In this connection the following statement shows the names of the carriers which are in receivership at the present time, the amount of the indebtedness owing to the government, and the face amount of collateral held in each case."

The indebtedness due under sections 202 and 207 of the transportation act includes receivers' certificates and notes, respectively, acquired by the Director General of Railroads.

The indebtedness due under sections 209 and 212 represents over-payments made by the Treasury on certificates of the Interstate Commerce Commission under that section of the law known as "guaranty to carriers after termination of federal control."

Section 210 of the transportation act authorized the Secretary of the Treasury to make loans to carriers on certificates of the Interstate Commerce Commission. The commission specified in its certificates the collateral which each carrier was required to deposit with the Secretary of the Treasury as security for the loans made. At the time the loans were made the collateral usually had a market value not less than 25 per cent in excess of the amount of the loan made by the

Railroads in Receivership, Indebtedness to the United States, and Collateral Held, October 28, 1930

Carrier	Indebtedness: Principal	Indebtedness: Accrued and unpaid interest	Indebtedness: Total	Collateral: Face amount	Collateral: Type of security
Section 202					
Wichita Northwestern Ry. Co.	$50,000.00	.....	$50,000.00	.....	Receiver's equity in $600,000 first consolidated bonds deposited as collateral under sec. 210.
Section 207					
Minneapolis & St. Louis R. R. Co.	1,250,000.00	$562,500.00	1,812,500.00	$1,500,000.00	Refunding and extension mortgage 5 per cent bonds, Series A, of the carrier.
Section 210					
Fort Dodge, Des Moines & Southern R.R. Co.	200,000.00	11,155.93	211,155.93	400,000.00	First mortgage 5 per cent gold bonds of the carrier.
Gainesville & Northwestern R. R. Co.	75,000.00	33,569.53	108,569.53	75,000.00	First mortgage 6 per cent gold bonds of the carrier.
Georgia & Florida Ry., Receiver of the	792,000.00	47,520.00	839,520.00	1,100,000.00	First mortgage 20-year 6 per cent gold bonds of the Georgia & Florida R. R.
				800,000.00	Receiver's certificates, Series B.[1]
Minneapolis & St. Louis R. R. Co.	1,382,000.00	599,987.00	1,981,987.00	2,377,000.00	Refunding and extension mortgage 5 per cent bonds, Series A, of the carrier.
Missouri & North Arkansas Ry. Co.	3,500,000.00	1,131,641.66	4,631,641.66	5,000,000.00	First mortgage 6 per cent bonds of the carrier.
				830,300.00	First mortgage 6 per cent gold bonds of the carrier.
Salt Lake & Utah R. R. Co.	872,600.00	314,080.80	1,186,680.80	500,000.00	7 per cent cumulative first preferred stock of the carrier.
				500,000.00	7 per cent cumulative preferred stock of the carrier.
Virginia Southern R. R. Co.	38,000.00	13,039.56	51,039.56	76,000.00	First mortgage 6 per cent gold bonds of the carrier.
Wichita Northwestern Ry. Co.	381,750.00	148,882.50	530,632.50	600,000.00	First consolidated mortgage 6 per cent bonds of the carrier.
Sections 209 and 212	Overpayments				
Minneapolis & St. Louis R. R. Co.	292,022.23	.....	292,022.23	670,000.00	Surety bonds.
Missouri & North Arkansas R. R.	41,375.41	.....	41,375.41	100,000.00	Do
Total	$8,874,747.64	$2,862,376.98	$11,737,124.62	$14,528,300.00	

[1] Receiver's certificates not yet received but their deposit as additional collateral has been ordered by court having jurisdiction (United States District Court for the Southern District of Georgia).

government and hence was considered sufficient. Subsequent events, however, which forced some of the carriers into receivership have resulted in such a depreciation of the collateral that if the collateral were liquidated to-day the proceeds would be insufficient to discharge in full the government's claim.

During the last session of the Congress bills were introduced (S. 4254, H. R. 12601, 71st Cong., 2d sess.) authorizing the Secretary of the Treasury with the concurrence of the Interstate Commerce Commission, in cases where carriers were in receivership, to compromise claims or to exchange evidences of indebtedness arising out of advances made under section 210 of the transportation act. In order to enable the government to co-operate in such plans for reorganization as appear to be in the best interest of the government, and to permit the maintenance of the carrier as a public convenience and necessity, I believe that some such authority should be vested in the executive branch of the government. It seems to me desirable that the government retire as soon as practicable from participation in the financing of railroads. The Secretary of the Treasury should also be given authority to sell at not less than par and accrued interest obligations acquired from carriers under section 210 of the transportation act.

It is further recommended that a reduction may be made in the interest rate being paid on advances under section 210 of the transportation act, in those cases in which the Secretary of the Treasury, with the concurrence of the Interstate Commerce Commission, considers that such a reduction will assist the carrier in avoiding receivership, provided that the interest rate shall not be less than 3½ per cent.

I. C. C. to Investigate New Parcel Post Rates

WASHINGTON, D. C.

THE Interstate Commerce Commission has ordered an investigation to determine whether the consent of the commission should be given to the proposed changes in parcel post rates and regulations submitted to it last week by the Postmaster General, intended to increase parcel post revenues by about 5 per cent. Objections to the proposals may be filed with the commission in writing on or before January 15, upon which date the matter will stand submitted for decision.

During the last fiscal year, according to figures laid before the commission, the cost of handling and transporting parcel post matter has exceeded the revenue derived from that class of mail by $15,570,730.71. Frederic A. Tilton, Assistant Postmaster General in charge of the operation of the parcel post system, in a memorandum prepared for the Postmaster General, points out that the major expenditures in connection with the postal service are almost entirely beyond control of the Postoffice Department.

"The order issued by the Interstate Commerce Commission, July 10, 1928, granting an increase of approximately 15 per cent in the general rate of compensation for the transportation of mails on railroad lines had the effect of adding approximately $8,500,000 per annum to the cost of transporting parcel post," he said.

"This, together with the 10 per cent increase in salary to postal employees performing night service, the 15 per cent increase in compensation to postmasters at fourth class post offices, and the reduction in postage rates on parcel post matter destined to the more distant zones, under acts of May 24 and 29, 1928, increased by nearly $13,000,000 the computed loss in connection with parcel post. As a result of intensive studies now being made, it may be possible to reduce to some extent the deficit chargeable to parcel post by effecting further economies in the processes of handling and transportation, but it is highly improbable that even the most drastic measures in that direction could overcome a major portion of the computed loss of $15,570,000."

The theory that the parcel post deficit can be eliminated solely by increasing the volume of business, according to Mr. Tilton, is the one most frequently mentioned and most insistently urged. "The theory is plausible," he says, "but it would probably necessitate an increase of 60 to 75 per cent in the volume of business to overcome the $15,570,000 deficit. To secure such an increase would necessitate an active, continuous and aggressive campaign for business in direct competition with other media of transportation operated for profit."

Mr. Tilton points out that the final resort is to increase postage rates on matter destined to those zones in which it is shown by the computations that the expenditures exceed the revenues.

"At the same time," he says, "it would seem to be advisable to reduce somewhat the rates to those zones where the revenues are computed to be far in excess of the expenditures, and particularly where the parcel post rates are so much higher than express rates that they cannot be considered competitive. Thus, any new schedule of parcel post rates should be in the form of a scientific readjustment based upon the actual cost of the service, with due consideration for what the traffic will bear, as may be fairly judged from the rates charged by competitive services."

In the 17 years of operation of the parcel post system, Mr. Tilton points out, there have been no radical changes in the rates excepting in the case of the first, second and third zones, where the rates on "additional pounds" have been reduced materially, and it is in these zones and because of the very low rates on "additional pounds" that it is found that the expenditures exceed the revenues by approximately $26,000,000.

Mr. Tilton argues that the present parcel post rates are in some cases highly inequitable. "The most illogical of all," he says, "is the eighth zone rate, viz., 13 cents for the first pound and 12 cents for each additional pound. Under this schedule the rate on a single 50-pound parcel is $6.01, while the rate on 50-one-pound parcels is but $6.50. Unquestionably the acceptance of 50 one-pound parcels at 50 different offices together with 50 deliveries to 50 separate addresses involves far more than 49 cents expense to the postal service in excess of the cost of acceptance and delivery of a single 50 pound parcel. Obviously, the rate for the first pound is too low or the rate for the additional pounds is too high, or both. This disparity exists in most of the other zone rates but to a lesser degree than in the case of the eighth zone rate."

"These proposed increases and adjustments in the parcel post scales, do not bring the rates fully up to the computed cost of handling and transporting parcel post, but they are approximately 5 per cent higher, as a whole, than the present scales, and probably approach the limit of what the traffic will bear."

The proposed schedules are generally well below the average express rates, it is stated, although in the case of heavy parcels destined to points near the inner boundary of zones instances may still be found where the express rates are lower than the parcel post rates.

Senator McKellar, of Tennessee, on December 18 introduced in the Senate a bill to repeal the provision of law under which parcel post rates may be changed by the Postoffice Department with the consent of the commission and also a resolution requesting the commission to take no further steps in the matter until the matter is passed upon by Congress.

Merchandising Message—

All Employees Reached by Radio

N. & W. by hook-up increases efficiency meeting participants to 4,200 employees, with many more listening in

THE Norfolk & Western on December 5 used the telephone and radio to carry the program of its annual efficiency meeting to its employees and patrons throughout the length and breadth of its territory. These annual meetings, which have served as a stimulus to greater efficiency and more friendly relations for a number of years, have heretofore been attended by about 500 delegates. By the use of telephone and radio more than 4,200 employees gathered in assembly halls at various points on the system heard the program, and in addition there were doubtless other unnumbered thousands of employees, their families and patrons who heard the program over the radio in their own homes.

The general theme of the program was the merchandising of railroad service and the various officers of the company who spoke on this subject delivered their addresses at different assembly halls where employees were gathered. Thus employees meeting in five different cities had at least one address from a speaker present in person, in addition to the other addresses which came in over the telephone and by radio. Assemblies of employees were reached entirely by radio at eighteen other points.

Vice-President W. J. Jenks, in his address, divided railway history into five periods, viz., engineering and construction; development; operating progress; regulation and legislation; and merchandising, this last being the period we are now entering.

Entering a Merchandising Era

"This new problem of the railways," he said, "is a natural result of the development of competing forms of transportation. The nation-wide building of good roads at public expense, together with the development of the automobile brought competition in the form of trucks which carry the products of industry and agriculture that were formerly handled by the railroad—passenger buses and privately owned automobiles which carry millions of people who would otherwise travel by train. The development of inland waterways, largely with taxpayer's money, has brought competition for the carrying of bulky commodities. Even in the air we have competition—the commercial airplane carries express, mail and passengers, all representing a loss of revenue to the railroads of the country. It is the problem of the railroads, therefore, to meet this new competition. It is a problem of merchandising railroad service. It is a problem of selling the safety, economy, dependability, efficiency, convenience, comfort and value to the individual, community, state and nation of railroad transportation service.

"The problem itself, is that of selling railroad transportation service to the public. It is a problem in merchandising. And the first requisite of successful merchandising is a product that is desirable and attractive. Consequently we must exert every effort to so improve our service as to make it desirable and attractive. We must carefully consider the elements of safety, dependability, convenience, comfort and a host of other factors which favor rail transportation, striving for constant improvement in every phase of our service.

"In the second place, we must recognize this problem and face the facts squarely. It is the duty of every member of the Norfolk & Western family to study this subject of merchandising rail transportation and contribute something, not only toward the betterment of our service, but by submitting suggestions and helping in the solicitation of traffic.

Put Stop to Special Privilege!

"In the third place, we must all join in a concerted effort and put an end to the special privileges and unfair advantages that our present competitors now enjoy. We do not want to hinder the development of other forms of transportation. But we must fight for that which we believe to be right and know to be fair. We must fight against the sacrificing of the greatest transportation machine in the world to forms of competition which are able to operate only because the public—every taxpayer—is paying a goodly part of what should be their operating cost."

Employees Can Give Valuable Assistance

Vice-President B. W. Herrman dwelt upon specific means whereby employees could aid in selling railway service. "A constantly increasing tonnage of merchandise freight is being handled by motor trucks, operating in both inter-state and intra-state traffic," he said. "This freight traffic on public highways has grown to the point where it would be possible for any employee of the railway in any city to develop the fact, by discreet inquiry, that some at least of the merchandise, food products and other commodities that he purchases during the course of the year have been shipped to the merchant with whom he is doing business by means of motor truck rather than by the railway.

"Employees should make inquiries regarding the transportation element in the merchandise they buy and 'pass along' the information so obtained to some representative of the traffic department. The situation in regard to employee solicitation of passenger traffic is much the same. The railway has passenger traffic representatives at all of the larger points on the line and these representatives' names and address are listed in our passenger time table copies of which can be obtained at any station. Information regarding coal traffic may be passed along in a similar manner to any freight traffic department representative or to the coal traffic department at Roanoke.

"One of our employees, not long ago, was walking down a business street in Roanoke and, being alert and

interested in his own welfare as well as in the future of the railway, he noticed a large truck unloading a shipment of merchandise in front of a store that he patronized. It took but a second for this employee to jot down on the back of an envelope the name of the trucking line and the manufacturers name and address which was stenciled on the sides of the boxes being unloaded. Later in making a purchase in this store, he inquired of the proprietor regarding the manner in which his shipments of merchandise were received. He found that some of this freight was handled by a truck line—because the manufacturer, without careful investigation, thought he was helping his patrons by using a truck line rather than the railroad. This employee made no attempt to argue the relative merits of truck and rail service, but merely said: "I am a railroad employee. My wages and those of a large number of men in this town come from the money that is paid my railroad for the transportation of freight and people. I buy the products you sell, and since the money with which I pay you comes from the railroad, I think that you ought to purchase the product that I help to manufacture and the sale of which makes it possible for me to buy the products you sell. I am going to pass along a traffic tip to our freight traffic department and ask someone familiar with rates and similar matters to call on you."

"The next day this employee handed one of our freight traffic department men a note written on the back of an envelope. It gave the name and address of the merchant, the name of the truck line and the name and address of the manufacturer whose merchandise arrived by truck. A representative of the freight traffic department immediately called on the merchant and another representative called on the manufacturer in a distant city. Within two weeks arrangements had been made with both parties and all freight moving from the warehouses of this particular manufacturer to this particular local merchant is now being handled by rail."

Importance of Coal Tonnage

H. C. Weller, general superintendent, emphasized the importance of the company's coal traffic. "There is," he said, "a keen and constantly increasing competition for coal by fuels which do not move by rail; competition that affects, and will continue to affect, the future of the railroad and a large percentage of its employees. The fact that we do not see any appreciable volume of coal being transported in motor trucks or airplanes does not mean that we have a monopoly on this business. Our competition simply takes another form.

"The coal industry itself is in much the same position as our railroad—new forms of competition have developed in recent years with the result that our friends in the coal business are compelled to give their best thought and a great deal of their time to merchandising. Gas and oil, used for heating purposes, constitute real competition, not only for our coal producers and their selling agents, but also for the railroad which depends upon a large volume of coal tonnage for the greater part of its revenues. The competition of substitutes for coal is a problem in which we are all vitally interested.

"The volume of consumption of the various coals mined in the eastern part of the United States is a matter largely of successful advertising and sales effort. This fact was recognized by the Norfolk & Western several years ago. For some time we have been carrying on an extensive, unusual and interesting campaign of advertising the coals mined on our line, together with a program of co-operation with our coal producers and their selling agents. We adopted the term 'Fuel Satisfaction' to describe the various coals mined on our line —because they all give complete satisfaction according to the use for which they are fitted by character and composition. At the same time we adopted the slogan 'Carrier of Fuel Satisfaction' which is used *with* the name of the railway in all of our advertising and literature."

It Is the Employees' Problem

Col. W. S. Battle, Jr., vice-president, in his address stressed the importance of the bearing of this problem on the "job and income of every employee of this railway." "Moreover," he continued, "the manner in which this problem is met will determine the future of the railroad, the future of your job, and the future of the community and state in which you live. Its outcome will determine the number of employees that this railway can keep on its payrolls; it will determine, to a large extent, the amount of money that the railway can pay to individual employees; it will determine the volume of purchases that the railway can make of the industries and business interests in the territory it serves; it will determine the character of service that the railway can render the public; in general it will affect every individual and every element involved in the service of transportation and in the territory traversed by this road.

"We should like to believe that the employees of the railway are helping to solve this problem because of their loyalty, appreciation and interest. We should like to believe that our employees have grasped the significance of all that has been said and written on this subject in recent months. But we *know* that, sooner or later, every employee of the railroad will have to join in this drive to increase our business and protect our property because the selfish interest of each employee will eventually compel, not only consideration of the problem that the railway is endeavoring to solve, but active co-operation as well.

"What I have just said to the employees of the Norfolk & Western applies in a modified degree to every citizen, farmer, merchant, manufacturer and professional man in the territory served by this carrier. The railway renders a tangible and constructive contribution to the industry, agriculture and the hundreds of communities that it serves. This contribution is in the form of an adequate, efficient transportation service, of wages paid to its thousands of employees, of purchases of millions of dollars of materials and supplies and of the payment of taxes to federal, state, county and municipal governments."

"In voicing this opposition I am not protesting against the use of the highways by farmers or milk trucks for intra-state purposes. I am protesting against the unregulated use of the highways by common carrier merchandise trucks and fleets of trucks without regard to length, or width, or weight, with the attendant damage to highways and the accompanying danger to other travelers thereon."

Study of Railway Periodicals Urged

R. G. Henley, superintendent of motive power, in an address delivered for him by O. F. Hark, general master mechanic, told of the efforts of the railway to maintain employment by proceeding with a large program of capital expenditures. It was to the interest of shop employees, he showed, for them to endeavor in every way to bring traffic to the railroad. J. E. Crawford, general manager, in his address, dwelt upon the

necessity for maintaining a high degree of efficiency in the service the railroad was offering for sale. He pointed out that accident prevention effort and care in relation to grade crossings (protecting all switching movements, etc.) would promote good will. In closing he said:

"We also have many instances where employees have, through the medium of current railroad publications, studied the development of similar railroad work on other carriers with the result that these employees have been able, not only to increase their own efficiency, but to make suggestions which have aided greatly in the efficiency of their respective departments."

Freight Car Loading

WASHINGTON, D. C.

REVENUE freight car loading in the week ended December 6 amounted to 787,173 cars, a reduction of 146,136 cars as compared with the corresponding week of 1929 and of 197,600 cars as compared with 1928. The decrease as compared with 1928 was 20 per cent, whereas in the preceding week it was 22 per cent and the week before that it was 24 per cent. Reductions as compared with both years were shown as to all commodity classifications and all districts. The summary, as compiled by the Car Service Division of the American Railway Association, follows:

Revenue Freight Car Loading

Week Ended Saturday, December 6, 1930			
Districts	1930	1929	1928
Eastern	176,235	206,497	216,906
Allegheny	151,471	183,569	200,423
Pocahontas	48,111	55,701	57,856
Southern	121,475	138,339	154,220
Northwestern	95,608	114,365	115,244
Central Western	127,161	154,011	153,633
Southwestern	67,112	80,827	86,491
Total Western Districts	289,881	349,203	355,368
Total All Roads	787,173	933,309	984,773
Commodities			
Grain and Grain Products	40,105	48,000	56,699
Live Stock	27,631	31,269	33,687
Coal	175,996	211,783	199,091
Coke	9,524	12,447	10,706
Forest Products	34,976	52,927	63,129
Ore	6,064	8,808	11,193
Mdse. L.C.L.	223,072	247,465	256,444
Miscellaneous	269,805	320,610	353,824
December 6	787,173	933,309	984,773
November 29	702,085	836,310	900,556
November 22	779,757	949,716	1,029,237
November 15	829,251	982,926	1,056,120
November 8	881,401	1,048,968	1,054,353
Cumulative total, 49 weeks	43,890,741	50,422,900	49,057,625

The freight car surplus for the last week of November averaged 580,498 cars, an increase of 47,053 cars as compared with the week of November 22. The total included 304,100 box cars, 213,752 coal cars, 28,065 stock cars, and 11,559 refrigerator cars.

Car Loading in Canada

Revenue car loadings at stations in Canada for the week ended December 6 totaled 54,571 cars, a decrease from the previous week of 823 cars and a decrease from the same week last year of 4,950 cars.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada		
December 6, 1930	54,571	30,042
November 29, 1930	55,394	28,004
November 22, 1930	60,608	31,613
December 7, 1929	59,521	35,141
Cumulative Totals for Canada		
December 6, 1930	3,012,359	1,623,996
December 7, 1929	3,370,377	1,995,332
December 8, 1928	3,518,312	1,936,626

Motor Transport Hearing Is Continued at Boston

THE Interstate Commerce Commission, represented by Commissioner Ezra Brainerd, Jr., and Examiners Leo J. Flynn and Albert E. Stephan, continued its hearings on Docket 23,400, Coordination of Motor Transportation, with a session at Boston, Mass., on December 15-16. At this hearing, testimony was taken from three of the principal New England railways as well as from a large number of independent motor vehicle operators. The bitter rivalry between the railway and independent motor truck operators was plainly indicated at this hearing.

A few days before the Boston hearing, testimony in this proceeding was taken at Detroit, Mich. The only railway to testify was the Pere Marquette, the remainder of the hearing being taken up with the testimony of motor vehicle organizations and of the Michigan regulatory commission. Examiner Flynn, who presided at the Detroit hearing, criticized the railways for their failure to take advantage of the opportunity to state their case more fully.

"The railways have been making representations to the commission as to their condition," he said, "but now when they have an opportunity to come and present their case in this proceeding they do not do it in the manner and to the extent that they should. There should be more testimony and constructive thought advanced by experienced traffic officials at these hearings, which will help toward the solution of the serious transportation problems which it is the purpose of this proceeding to help solve."

New Haven President Testifies

The first witness at the Boston hearing was J. J. Pelley, president of the New York, New Haven & Hartford. Mr. Pelley described the characteristics of the New Haven's territory which make it particularly favorable for motor vehicle operation. He told of the development of motor coach and truck competition and its effect on railway traffic, and pointed out the lack of regulation of much of this kind of service. Contending that the various forms of transportation will never find their place in the nation's transportation system until all are operated under similar conditions of public supervision, he suggested lines along which motor transport should be regulated. He held that certificates of public convenience and necessity should be required, and that in the granting of these, consideration should be given to the character and probable permanency of the service proposed, the service already available, the financial responsibility of the applicant, his suitability and experience, the provision of adequate surety for the protection of the public, and the effect which the proposed service would have upon the convenience and safety of the public. Regulation, said Mr. Pelley, should cover rates, schedules, service, safety, and accounting.

Commissioner Brainerd questioned Mr. Pelley at some length as to the extent to which the New Haven has co-ordinated railway and motor vehicle service. The latter described the system of motor coach and truck lines which the New England Transportation Company, a subsidiary of the New Haven, is operating parallel to its railway lines. Asked what existing evils would be eliminated by federal regulation of motor transport, Mr. Pelley said that it would correct the chaotic condition now prevailing with respect to rates and service, and

would enable interstate motor vehicle operations to be carried on on an economic basis and at a profit. He testified that the motor transport operations of the New Haven are profitable as a result of the saving they permit in train operating expenses. Asked if the New Haven's own motor coaches were not affecting its passenger train revenues adversely, he admitted that this might be true to a slight extent, but added that if the New Haven did not operate motor coaches some one else would, and the New Haven would lose the same amount of traffic anyway. Mr. Pelley favored the regulation of common carrier trucks only, and not contract carrier trucks, but he went on to explain that in his opinion any trucking organization which serves more than one shipper is actually a common carrier. In conclusion, he stated that he wanted everyone who solicited everybody's traffic to do so upon the same basis as does the New Haven, under the terms of the regulatory requirements to which it is subject.

The next witness for the New Haven was Arthur P. Russell, executive vice president, who described the organization and development of the New England Transportation Company, of which he was formerly president. At present, he said, the transportation company is operating 249 motor coaches on 61 routes, 26 of which are substitutes for rail service. Similarly, it is using trucks to meet the public demand.

Large Savings Effected

A. H. Fairfield, operating commerce assistant of the New Haven, followed Mr. Russell on the stand. The time element, he said, has become of paramount importance as a shipping factor, and the way freight train is unable to meet this condition. The New Haven established its motor truck services to meet the changed transportation situation, he continued, assigning trucks to zones of operation where they could replace way freight train service. As a result of its truck operations, the New Haven is able to save 6,734 train miles weekly, Mr. Fairfield said, the money saving being $12,120 a week, or $630,000 a year. The New Haven's motor coach operations are saving the railroad $1,201,543 a year in train operating expenses, on the basis of present operations. The road has eliminated 836,366 passenger train miles a year.

H. Price passenger traffic manager of the New England Transportation Company, described in detail its motor coach operations. He said that 516 miles of routes were of a "rail-saving" character, while 1741 miles of routes were supplementary to rail service. Fares charged are the same as rail fares, he testified, except where competitive conditions have compelled lower rates, between 1.7 and 3.0 cents per mile. Railway tickets are honored on the motor coaches, the transportation company receiving the redemption value of such tickets from the railway.

Asked by the commissioner whether he desired to be permitted to establish joint rail and motor coach rates, Mr. Price answered in the affirmative. He mentioned the fact that short haul traffic of the motor coach lines is decreasing, while long haul traffic is increasing. The New England Transportation Company and its competitors are operating 21 daily schedules between New York and Boston, the standard rate of fare being $4.00. Several lines charge only $2.00, however, Mr. Price said, or a rate of 8 mills per mile. Under examination by counsel for a group of truck operators, Mr. Price admitted that the New England Transportation Company owns the Victoria Bus Line, operating between New York and Boston, as well as two other lines which are apparently independent.

J. A. Cunningham, freight traffic manager of the transportation company described the operation of its 90 trucks from 26 centers on the New Haven lines. These trucks, he said, have speeded up the service an average of 24 hours and have been effective in recovering traffic. The rate situation he described as chaotic, and he said that this condition has been aggravated by the fact that truckers are willing to carry freight for almost any price in order to secure return loads.

Truck Regulation Needed

Asked by Commissioner Brainerd what he would do to remedy the situation, Mr. Cunningham said that regulation should be provided which would standardize rates and service and eliminate the inequalities which now exist. In reply to another question, he said that the truck operations of the transportation company have been remunerative, aside from the savings in rail operation expenses which they make possible. Mr. Cunningham stated that store door collection and delivery service will have to be provided by the railways. Commissioner Brainerd suggested at this point that federal legislation is not necessary to enable the railways to establish such service. In reply to further questions from the commissioner and from the counsel of the motor truck operators, Mr. Cunningham stated that the transportation company charges the railway a mileage rate for the operation of trucks which handle railway freight, and that this rate varies in accordance with the proportion of railway freight and transportation company freight handled. In addition to the work which it does for the New Haven, Mr. Cunningham said, the transportation company carries on a business as an individual truck operator, with the rates in its tariff less than corresponding railway rates. This independent activity is necessary to meet competition, he said.

The next witness for the New Haven was H. W. Dorigan, assistant to the controller, who described the transportation company's methods of keeping accounts. He submitted an exhibit showing the decline in the l.c.l. freight traffic originated on the New Haven, representing a decrease of 26 per cent between 1920 and 1929. The decline in passenger traffic on the New Haven since 1920 has been nearly 50 per cent, while the passenger train miles operated have decreased only 14 per cent. Referring to payments made by the New Haven for the New England Transportation Company's trucking of railway freight, he said that the basis of the charges against the railway is the truck miles operated, where the trucks handle only railway tonnage. Otherwise, the basis of the charge depends upon the proportion of each class of traffic—whether railway or transportation company—to the total. In the year ended June 30, 1930, the transportation company handled 122,409 tons of freight for the New Haven and its steamship lines, while it handled 5,440 tons of freight for its own account. Under cross examination, Mr. Dorigan stated that the payments made by the railway to the transportation company are on a basis of cost plus 10 per cent.

Maine Central Testimony

This concluded the testimony of New Haven witnesses. The next witness was W. E. Reeves, assistant comptroller of the Maine Central. Mr. Reeves testified that the Maine Central operates a limited motor coach and truck service through a subsidiary, the SamOset Company. Mr. Reeves was followed by M. L. Harris, general passenger agent of the Maine Central. He said that the two motor coach lines operated were established to meet local conditions. On one line the fare charged is the same as the railway fare, while on the other it is

five cents a mile. Mr. Harris advocated the regulation of interstate motor coach lines.

The last witness for the Maine Central was G. W. Miller, assistant to the freight traffic manager. He told of the operation of a trucking line by the railway between Bar Harbor, Me., and Bangor, on which the rates are the same as railway rates and the service includes store door collection and delivery. He said that the company is about breaking even on this operation.

The first witness for the Boston & Maine was N. W. Hawkes, vice-president in charge of traffic. He described the Boston & Maine's efforts to meet truck competition and said that this competition had been intensified by the short distances between centers of population in Boston & Maine territory. The trucks are able to get the traffic because their service is cheaper and better, Mr. Hawkes said. He stated that in certain instances shippers use the availability of truck service in attempts to frighten the railway into reducing rates. Mr. Hawkes described the truck operations of the B. & M. through its subsidiary, the Boston & Maine Transportation Company, and referred to the fact that the commission had declined to receive a tariff of the transportation company providing for the movement of freight by the railway and transportation company jointly under an express tariff arrangement. Mr. Hawkes said that the law should not impose heavier restrictions on the truck operations of the railways than upon the operations of independent companies. If the railways cannot do what others do there should be truck regulation, he said.

Boston & Maine Services

Mr. Hawkes also told of the motor coach operations of the transportation company, and said that the Boston & Maine favors the regulation of interstate motor coach lines. Asked by the commissioner what purpose there is in railway's operating long motor coach lines, Mr. Hawkes said that railways desire to share in the revenue from this business which has been taken from the trains. The commissioner suggested that in operating long distance lines, railways are encouraging passengers to travel by motor coach, and he emphasized the point that a railway does not help its rail revenues by operating long motor coach routes. Under cross-examination, Mr. Hawkes testified that the transportation company lost approximately $4,000 on its truck operations last year and about $40,000 on its motor coach operations.

Following Mr. Hawkes, H. F. Fritch, president of the Boston & Maine Transportation Company, took the stand and submitted exhibits showing competitive motor coach lines in B. & M. territory. The 99 motor coaches operated by the transportation company are leased to it by the B. & M., which owns this equipment. The motor coach rates are lower than rail rates, he said, where the operation is carried on independent of the rail service, as between Boston and Portland, Me. Last year, the transportation company earned a profit of $25,000 on this line. The operations in general, however, are unprofitable except when consideration is given to the saving in rail operating expenses.

The next witness was F. J. Carey, manager of trucking operations of the Boston & Maine Transportation Company. Mr. Carey said that the transportation company contracts for all of the trucks which it uses, the transportation company paying the contractors an agreed rate and the railway reimbursing the transportation company for the truck costs and for overhead when the equipment is used in handling railway freight. In addition to handling railway freight, the transportation company carries on a trucking business on its own account, fixing its rates at such levels as are necessary to meet competition. Only station-to-station service is given where the truck operation is in replacement of rail service, but store-door collection and delivery is provided for in connection with the handling of the transportation company's own freight. The rates charged on the transportation company business are frequently changed from day to day to meet new developments in competition. In general, he said, truck rates are lower than the rail rates between common points.

Deficits Misleading

G. F. Glacy, controller of the Boston & Maine, described the accounting methods of the transportation company and features of the contract between the railway and the transportation company. He said that the transportation company had a deficit of $5,335 in eight months of 1925, a deficit of $22,753 in 1926, a surplus of $18,854 in 1927, a deficit of $21,478 in 1928, a deficit of $40,506 in 1929 and a deficit of $15,151 in the first ten months of 1930. He said that 75 per cent of the trucking operations of the transportation company are carried on directly for the handling of railway freight. He said that the figures indicating a deficit from the operations of the transportation company are misleading since they do not take into account that the transportation company permits the railway to save $195,000 a year in train operation expenses.

At this point F. J. Wall, general traffic manager of the New Haven, took the stand. He introduced as an exhibit a chart showing that the railways have not shared as freight carriers in the increased production during recent years. He said that the New Haven knows of 255 competitive motor coach services in southern New England, and that this is only a partial list. He estimated that 5,000 motor trucks are competing with the New Haven, these having a capacity of 25,000 tons. He said that truck lines which originally handled only package freight are now securing substantial tonnage in liquid and bulk commodities. Truck operators, he said, observe no rate relationship between commodities and communities.

Asked what difficulties there are in the way of further rail and motor vehicle co-ordination, Mr. Wall said that co-ordination is possible only when motor vehicles are operated in connection with train service by railways. He said that the New Haven has held off from store door service since it would be necessary to make an additional charge for this service and this would make wider the margin between rail and truck rates. Rail rates, he said, are too thin to absorb a store door charge. Commissioner Brainerd asked him if store-door service isn't the proper solution of the problem of meeting trucking competition. Mr. Wall replied in the affirmative, but added that first of all truck operation should be regulated on the same basis as rail operation. The commissioner asked if the New Haven would like to file an express tariff through a subsidiary company in order to offer store-door service. Mr. Wall said that the New Haven would like to do this or organize a forwarding company. Operations under an express tariff, he said, would meet the competition only to a limited extent.

This ended the railway testimony at the Boston hearing. Following the railway witnesses, a number of independent motor truck operators headed by Day Baker, manager of the Motor Truck Club of Massachusetts, took the stand to testify regarding their service and the taxes which they pay. Statistics were cited to prove that motor vehicles are adequately taxed. The claim was made that railway trucking is ruining independent trucking, and it was also contended that regulation of the truck lines is unnecessary.

Let Railroad Men Manage the Railroads

WASHINGTON, D. C.

A STRONG appeal for a more intelligent understanding of the problems of the railroads was made by Merle Thorpe, editor of Nation's Business, in a radio talk over a nation-wide hookup of the National Broadcasting Company, on December 15.

Mr. Thorpe pointed out that the railroad business today is suffering not only from the present recession in business, but from a more threatening problem in the form of competition. "Buses and automobiles," he said, "are increasing. You can almost see them multiply. Passenger revenue last year was four hundred million dollars less than in 1920. Freight revenue increased in this period, but the prospect of a continued expansion of freight business is darkened by the competition of water lines, pipe lines and motor trucks, and by industrial changes that may check the growth in the demand for ton-mileage. For example, greater economies in use of coal, changes in location of industries, and slower growth of population affect freight futures."

The railroads, Mr. Thorpe said, "are prevented, through legislation of regulation, from fairly competing with new or old forms of transportation, and in many instances their competition is rendered unfair by being subsidized by the government. The railroads ask for adequate regulation of motor bus and truck operation, with no discriminatory provision against the railroads operating in the same field. I am disappointed that they did not ask for a relief from their own excessive regulation rather than wishing similar regulation upon their competitors."

"They further ask a respite from rate reductions and suspensions by regulating bodies, both state and interstate, and from such action as will increase the expenses of the carriers. They ask for a withdrawal of governmental competition, both through direct operation of transportation facilities as well as indirectly through subsidies. In other words, the railroads ask for a new spirit and attitude on the part of legislative and regulative authorities. They say,—and in fairness,—that the railroads should be recognized as engaged in a business, subject as other business is to the operation of economic laws, and should accordingly be permitted to adapt themselves quickly to changes in economic conditions which confront them. They ask a recognition that railroad operation is a fundamental public necessity and that the maintaining at all times of an efficient national system of transportation, adequate to the business needs of the public, is necessary if we are to progress as a nation.

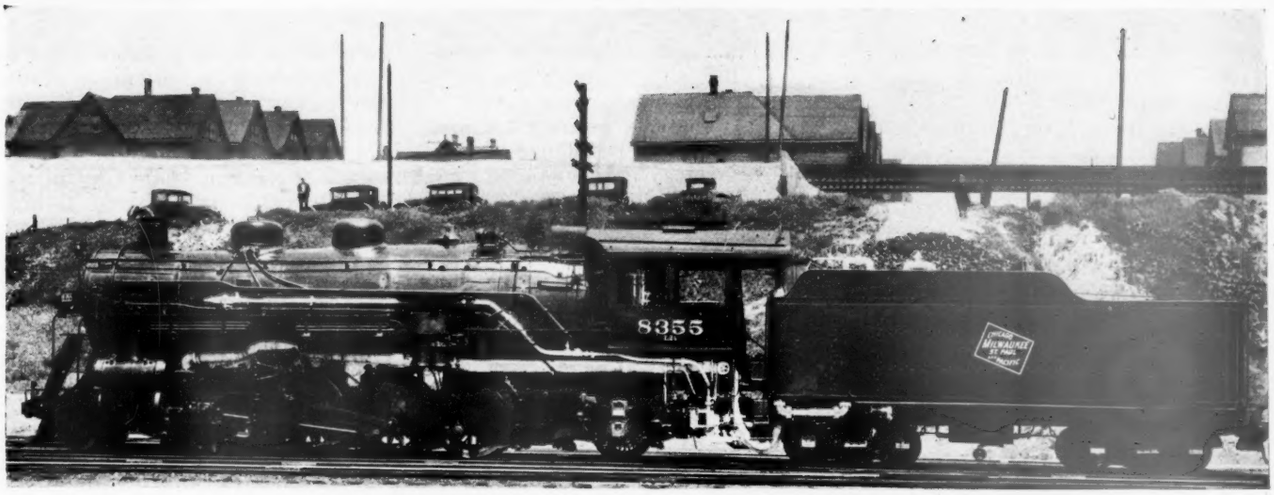
"The trouble is that we look upon the railroads as an abstraction, as not a flesh-and-blood business. If the railroad interest to our community could be set up as a department store, something that we could see and feel, we might not be so quick to give ear to every plan that contemplates more difficulty in allowing the railroads to make a living.

"I believe in regulation of those businesses which are for the necessary use of all the public. I do not believe in excessive regulation, and my observation in Washington has been that, once regulation is started, it grows like a mushroom. There is never any diminution; there is always this added and that added, until the economic freedom of the individual is whittled away. Railroad management today has not the opportunity to manage. Competition we shall always have. There is no one within the sound of my voice but knows that around the corner there is some form of competition which will affect him. The glory of competition *is in* competition, and in the present plight of the railroads the concern is not on account of their competition, the concern is on account of their not being able to meet this competition manfashion, pitting their resourcefulness against the resourcefulness of their competitors. My platform, which as usual is unpopular, is to give railroad management more of the job of managing the railroads."

* * * *

Reunion of American Delegates to the Eleventh International Railway Congress, Madrid, Spain, May 5-15, 1930, at Hotel Pierre, New York, November 20

Starting at the left-hand side of the table, looking toward the head and following around to the right, are: Marcel Hasbrouck of New York, travel bureau conductor; Mrs. von Schrenk; W. L. Lentz, engineer motive power, New York Central Lines, New York; Mrs. Hankins; Dr. Hermann von Schrenk, consulting timber engineer, St. Louis, Mo.; Mrs. Forster; Walter F. Schleiter, president, Verona Tool Works, Pittsburgh, Pa.; Mrs. Wishart; James B. Strong, president, Ramapo Ajax Corporation, New York; Mrs. Simmons; Champ Carry, vice-president, Pullman Car & Manufacturing Company, Chicago; Mrs. Lentz; Fred A. Poor, president, P. & M. Company, Chicago; Mrs. Strong; J. V. Neubert, chief engineer maintenance of way, New York Central Railroad, New York; Colonel Edward A. Simmons, publisher *Railway Age;* Mrs. Neubert; George R. Carr, chairman, Locomotive Firebox Company, Chicago; Bird M. Robinson, president, The American Short Line Railroad Association, Washington, D. C.; Mrs. Parham; W. C. Wishart, vice-president, New York Central Lines, New York; Mrs. Schleiter; F. W. Hankins, chief of motive power, Pennsylvania, Philadelphia, Pa.; Mrs. Carry; A. S. Merz, vice-president Standard Railway Equipment Company, New York; Mrs. Margaret S. Wood, Elkins Park, Pa.; H. J. Forster, secretary, American Railway Association, New York; Miss Schleiter, and R. J. Parham, St. Regis Paper Company, New York.



The First Milwaukee Mikado-Type Locomotive Equipped with a Water Conditioner

Water Conditioner Shows Savings on the Milwaukee

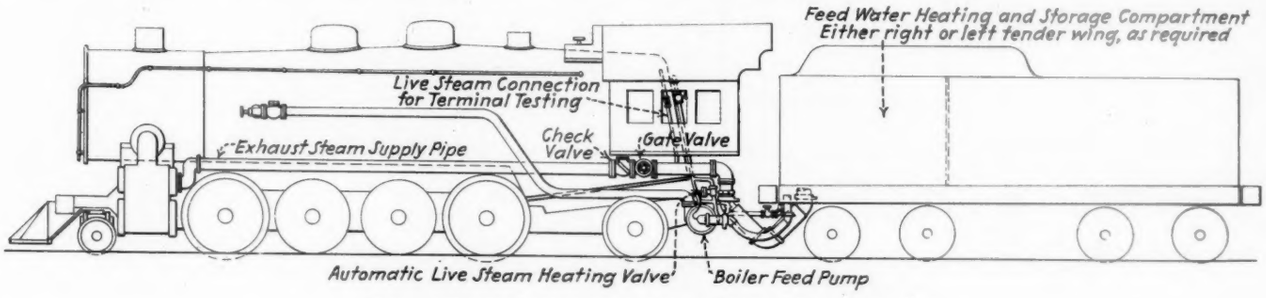
Tests indicate average locomotive feedwater temperature of 208.6 deg. F. and oxygen elimination of 82.4 per cent

THE Locomotive Water Conditioner, developed jointly by the Bird-Archer Company and the Chicago, Milwaukee, St. Paul & Pacific, under the direction of R. W. Anderson, general superintendent of motive power, was first applied to a Mikado locomotive about two years ago. From a descriptive article, published on page 567 of the *Railway Age* issue of March 1, 1930, it will be recalled that the principal objectives sought in the development of the device were simplicity, relatively low cost, low maintenance, feedwater heating, storage of hot water, feedwater treatment and removal of oxygen.

It is too early yet to say to what extent all of these objectives will be attained under all conditions of service. The first three are more or less inherent in the design. There is no question about the hot-water storage feature, and tests indicate that an average feedwater temperature of 208.6 deg. F. is readily attainable, as well as an average oxygen elimination in excess of 82.4 per cent. The success of service tests of the device on the Milwaukee to date are such that, besides the two light and heavy Mikados already equipped, five additional installations are now being made, including one on a converted 2-6-6-2 type locomotive.

A number of important improvements have been made since the Locomotive Water Conditioner was first described, the principal ones being the application of an exhaust-steam ejector to replace the small turbine-driven pump for supplying cold water from the main tank to the hot water storage compartment; and the development of an improved, turbine-driven, feedwater pump which will take hot water and deliver it efficiently and reliably against high boiler pressures.

The general principle of operation of the equipment has not been changed. Exhaust steam is brought back from the cylinders through a 6-in. pipe to heat the water in one leg of the tank which has been partitioned off to form a hot-water storage compartment of 700 gal. capacity, or more, dependent upon the needs. The temperature of water in this compartment is held uniform at or near the boiling point as long as exhaust steam is available, by means of a thermostatically-operated exhaust-steam control valve. A fixed water level is maintained in this compartment, as long as the loco-


Feed Water Heating and Storage Compartment
Either right or left tender wing, as required
Live Steam Connection for Terminal Testing
Exhaust Steam Supply Pipe
Check Valve
Gate Valve
Automatic Live Steam Heating Valve
Boiler Feed Pump

Piping Diagram of a Water Conditioner Application

motive is in operation, by means of a float which operates through a butterfly valve to control the supply of steam to the ejector. When the locomotive drifts or stops, this supply of stored hot water may be drawn upon to feed the boiler through the boiler feed pump. The design is thus adapted to assure the full benefits of feedwater heating, not only to road locomotives, but, for the first time, to yard, switch, transfer and other locomotives in intermittent service.

Feedwater Temperature Maintained in Excess of 140 Deg. F.

An ingenious and effective device is provided to prevent the possibility of injecting cold water into the boiler at any time, whether the locomotive is working or not. Should any attempt be made to start the boiler feed pump when water in the storage compartment is less than 140 deg. F., high-pressure steam is admitted to the water at the pump suction under the control of a thermostatically-operated live steam valve. Just as soon as exhaust steam is available to heat the water in the compartment above 140 deg., the live-steam valve automatically closes.

As a result of the above provision in the design of the Conditioner equipment, its operation has been rendered as nearly automatic as possible, boiler feeding being reduced to its simplest form, or, in other words, a one-valve operation, with the equipment available for use at all times. The boiler feed-pump steam valve in the cab is the only one requiring the attention of the engine crews, all other valves in the equipment being entirely automatic in action and of rugged construction, designed to give reliable service over a long period, under exacting conditions. The thermostatic control, required on only two of the valves, consists of a thoroughly-tested design, especially adapted for use with this equipment by the Fulton Company, Knoxville, Tenn.

Chemical treatment of the water is secured by the insertion of briquettes of the necessary chemical composition in a cylindrical container with removable cap, located on the left water leg of the tank, and connected to the cold-water delivery pipe, as illustrated in the drawing. Cold water, carrying the proper amount of the required chemical solution, then passes to the cold-water delivery line, mixes with exhaust steam in the heater condenser and is delivered to the hot-water storage compartment where the chemical reaction is greatly speeded up owing to the high temperature. Any scale-forming impurities or free mud which settles in the bottom of the compartment can be readily discharged at terminals through the sludge valve, illustrated.

Referring to the diagram, it will be noted that the Locomotive Water Conditioner is now available in two types, Type A employing a turbine-driven pump for supplying cold water to the storage compartment, and

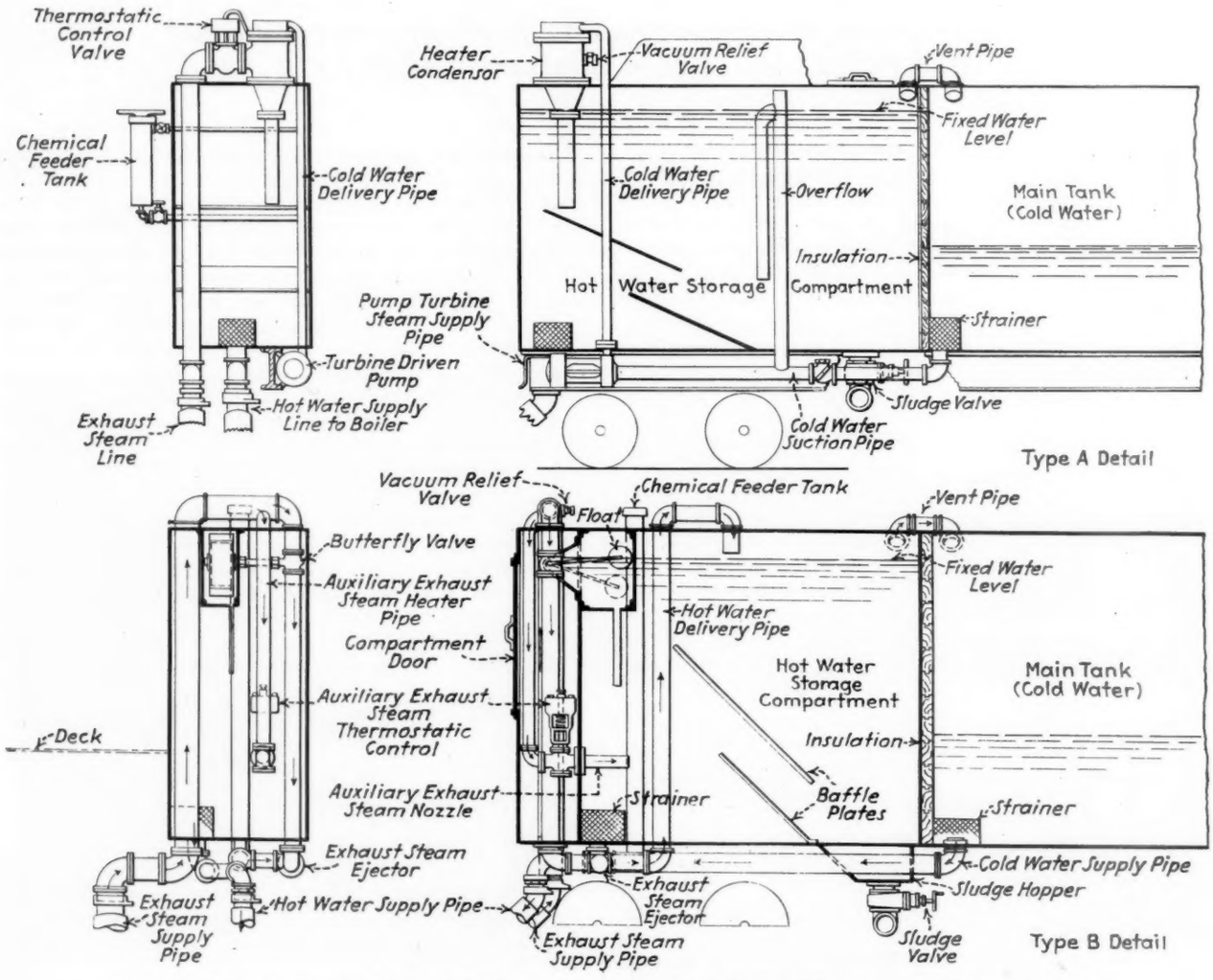


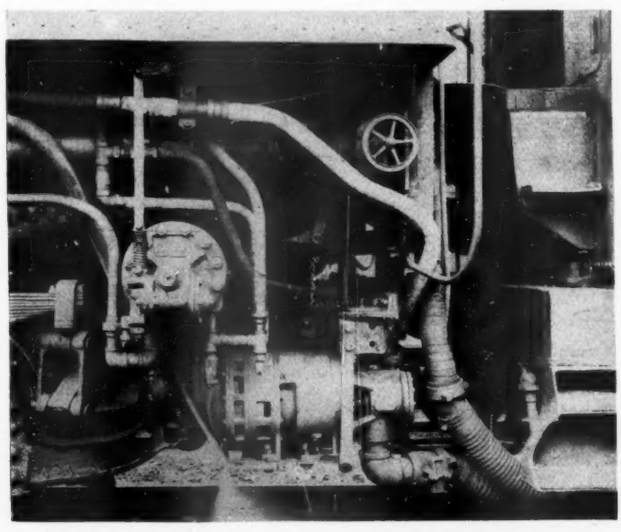
Diagram Showing Construction of the Type A and the Type B Conditioners as Applied to the Left Water Leg of a Tender Tank

the Type B employing an exhaust-steam ejector for this purpose. In the latter case, cold water flows by gravity to the ejector, where exhaust steam, drawn from the main cylinders, combines with the water and forces it through the hot-water delivery pipe to the storage compartment. The heating of the water in the Type B Conditioner is thus accomplished in two stages; first, in the ejector and, second, by the admission of exhaust steam through the thermostatic control valve directly in the hot-water storage compartment. The ejector is wholly automatic in operation.

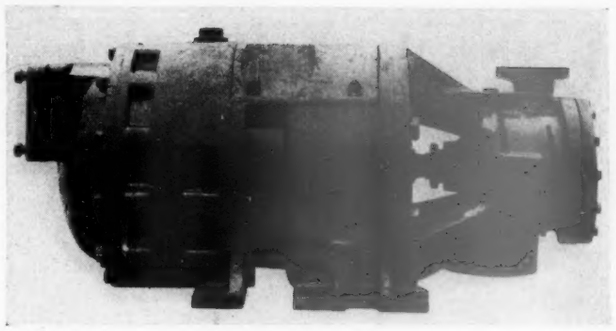
Boiler Feed Pump Is of Special Design

The heart of the Locomotive Water Conditioner equipment is the boiler feed pump, which must meet a number of difficult conditions, including constant feed, large delivery volume (up to 12,000 gal. per hr.) at high efficiency, safety, sturdiness, reliability and acceptance of water up to 212 deg. F. A centrifugal boiler feed pump was accordingly developed, which represents the results of the combined engineering experience of Allis-Chalmers Company, the Pyle-National Company and the Bird-Archer Company. This pump includes, in a single unit, a steam turbine, centrifugal water pump and regulating device assembled into an enclosed and compact design. There are no additional control valves, overspeed trips or any other parts required in the operation of the pump. Regulation is by means of an ordinary globe valve in the cab. The finished pump presents a simple and compact appearance, as shown in one of the illustrations.

The water end consists of a two-stage, double-suction, high-efficiency pump. It is assembled from the end and may be completely taken apart and put together on the locomotive in less than 30 minutes without disturbing any pipe or hose connections. The pump was designed particularly to handle water at the boiling point. The turbine wheel is designed to withstand speeds up to 30,000 r.p.m., without failure, although the maximum operating speed is limited to 6,000 r.p.m. Many thousands of similar turbines are said to be used in locomotive service with safety and economy. Overspeed protection is provided by a fly-ball governor, designed along the lines of a standard governor, which has been used in a large number of turbines in locomotive service. Lubrication of the bearings and governor mechanism, which run in a constant bath of oil, is accomplished by an ingenious arrangement of the governor shaft, which



Details of the Feed Pump and Piping Application



The Compact Boiler Feed-Pump Unit

is hollow and has flutes on the inside walls to lift the oil and furnish a continuous spray over all moving parts requiring lubrication.

In this pump, maintenance has been given careful consideration, and the entire unit is constructed with the idea of running without attention from shopping to shopping. The steam consumption is 45 lb. per hp.-hr. delivered to the shaft, the no-load steam consumption being 241 lb. per hr. At a speed of 3,500 r.p.m., the pump efficiency is 57 per cent and, at 6,000 r.p.m., 65 per cent (the latter calculated).

Test Results

Throughout the development period of the Locomotive Water Conditioner on the Milwaukee, the temperature of the water entering the boiler has been closely observed on numerous tests. In addition, test records of temperature and oxygen removal have been made by Dr. C. H. Koyl, water service engineer of the railroad. Doctor Koyl's report shows that on one test run an average temperature of 208.6 deg. was obtained with an average oxygen removal of 89.8 per cent. Twenty-four temperature readings were taken on this occasion and 12 oxygen determinations made of the water that passed through the Conditioner. An average of three tests of this nature showed, however, an average oxygen elimination of 82.4 per cent. The device has been operated without extra labor costs, other than ordinary maintenance, and the cost of the chemicals required for the treatment of the water evaporated. Locomotives equipped with the Conditioner have been successfully operated in territory where both treated and untreated waters, as well as mixtures of the two, have had to be handled.

AN EXPOSITION TO STIMULATE TRAVEL and to acquaint people with the highly efficient transportation service which the railroads provide will be held in the Shrine Civic Auditorium at Los Angeles, Cal., from the 15th to the 28th of March. It will be known as the Pacific Coast Transportation Exposition and the exhibits will tell the story of transportation, while the daily programs will be featured by a series of popular and illustrated lectures and talks on travel and transportation subjects.

THE NEW BRISBANE (QUEENSLAND) TO KYOGLE (New South Wales) railway was to be opened on September 27, Commerce Department reports state. The gage is 4 ft. 8½ in., representing the first practical step toward unifying the diverse gages now used in Australia. The new line will shorten by several hours the journey between the capitals of the two provinces, largely by eliminating the break of gage at the Queensland border on the present Brisbane-Sydney route. Until the new line is fully completed, a year or more hence, by the construction of a bridge over the Clarence river at Grafton, car ferries will be used to carry trains across this river.

New York I. C. C. Hearings Echo Packers' Power

Last reciprocity quiz of year unfolds icing monopoly—Altered waybills, secret rates and hand-picked bidders also found

THE power of the shipper to influence the purchasing of the railways and the alacrity of roads to place their purchases in exchange for traffic are not peculiar to the west, but are also evident in the east, was shown when the Interstate Commerce Commission held its third reciprocity hearing. The hearings, which were held in New York last week, were devoted to an investigation of conditions and practices on the Lehigh Valley, Erie and the Delaware, Lackawanna & Western, and further information was developed regarding the situation on the New York, New Haven & Hartford. It was the last of the hearings scheduled for 1930. The commission accumulated evidence of further ramifications of the reciprocal buying activities of the roads and brought out the widespread influence of the packers' traffic on railway purchasing. The traffic department of one road, it appears, virtually controls its purchasing department, while altered waybills and secret rates were also disclosed by the investigation.

Trucks and Swift Traffic

On June 8, 1926, E. O'Donnell, a traffic agent of the Lehigh Valley, wrote a letter to R. O'Hara, traffic manager of Swift & Company, in which he said in part:

> During the last two seasons I was instrumental in having the Lehigh Valley purchase trucks from the Mechanical Manufacturing Company. For this reason, Foreman Eaches of the Mahoning icing station showed me the defects of the trucks and minced no words in condemning them. Every truck has warped and bulged so that the screws have been pulled out of the angle irons, and a number of the bolts have snapped off. Mr. Eaches intends to order 20 trucks on June 15. I endeavored to have him recommend Mechanical trucks but it is doubtful if he will.

On June 23, E. J. Henry, western traffic manager of the Lehigh Valley, wrote a letter to C. A. Blood, traffic manager of the road, in which he said in part:

> I hope the order for 20 trucks has not yet been placed unless it was placed with the Mechanical Manufacturing Company. . . . it would be a little disturbing at this particular time to have purchases go wrong.

Telegrams followed, the orders for additional ice trucks were held up for investigation, and in July the Mechanical Manufacturing Company received an order for 100 trucks.

Draft Gear

Readers of the *Railway Age* are familiar with the letters written to the railroads by the traffic officers of Swift & Company and Armour & Company about draft gear. Similar letters were received by the three roads examined in New York. The Lehigh Valley record showed that the traffic department pressed the operating department of the road for action on the gear manufactured by the Mechanical Manufacturing Company, and that 200 gear were purchased for application to old cars.

The purchase and application of the gear entailed an expense of $10,461, letters of G. H. Foster, vice President of operation, and J. P. Laux, superintendent of motive power, showed, representing a net cost of $104-.62 per car, counting credits for the salvage value of parts replaced, as compared with the net cost of $40.62 per car for installing Miner gear on the same cars and $87.81 per car for installing Cardwell gear. Mr. Foster testified that the purchase of the gear offered a "chance to get traffic." The record showed that the other draft gear purchased in 1929 comprised 300 sets of Cardwell gear, 700 sets of Waugh-Gould gear and 200 sets of Session's gear.

More Radio Traffic

The letters showed that the Lehigh Valley had not purchased Cardwell gear prior to 1929, but purchased 300 sets of that gear in 1930. In October, 1928, E. J. Henry, western traffic manager of the road, sent an air mail letter to the freight traffic manager of the Lehigh Valley. He referred to requests for tonnage made by Vice President Rine of the Delaware, Lackawanna & Western, on J. R. Cardwell, president of the Union Draft Gear Company, who was known to be "heavily interested" in the Grigsby-Gruno Company. Mr. Cardwell called up the radio company, ascertained that "the bulk of the business was moving over the Lehigh Valley," and instructed that it be routed over the Lackawanna for the reason that the Lackawanna had been purchasing Union draft gear for years. Mr. Foster was asked if the road secured any radio traffic and replied, "Yes, quite a bit."

The letters showed that R. O'Hara, traffic manager of Swift & Company, had held a conference with J. J. Bernet, then president of the Erie, and he subsequently wrote that W. G. Black, then mechanical assistant to the president, personally visited the Mechanical Manufacturing Company. A month later Mr. Black wrote the superintendent of motive power that "when it is necessary to purchase new gear for renewals, orders should be divided evenly between the Waugh Equipment Company and the Mechanical Manufacturing Company," and on December 18, 1929, he wrote, "We have 1000 seventy-ton hopper cars and 12 locomotive tenders equipped with Durable gear." The purchase price of 1000 sets of Durable gear was approximately $65,000. On April 8, 1930, the general purchasing agent of the Erie wrote a letter to the manager of stores in which he quoted from a letter received from the Mechanical Manufacturing Company which read in part as follows:

> You have returned to us within the last several months a number of Durable gear originally shipped to the Lima Locomotive Works and applied to your engines.
>
> We have made no guarantee on the Durable A-I Gear when applied to locomotives, and inasmuch as we have discontinued the manufacture and sale of this gear, we are not in shape to make replacements.

Mr. Black, testified that he had considered the gear only from a mechanical standpoint. He said he did not see R. O'Hara when he went to Chicago and had not

talked to Mr. Bernet about it. Asked if traffic were mentioned or considered, he replied that his recommendations were made strictly on the basis of serviceability.

The Delaware, Lackawanna & Western exhibits contained letters from R. O'Hara about the Durable gear and the traffic of Swift & Company which resulted in the purchase by the Lackawanna of 10 sets for test; also a memorandum written by the assistant to the president stating that "F. W. Ellis, vice-president of Armour & Company, telephoned from Chicago today saying that the president was interested in the Waugh draft gear and asked that we give it consideration in connection with our new cars." The Lackawanna was "pleased to advise we are equipping 200 cars."

Packer Traffic and Commissary

In June, 1927, D. L. Gray, vice-president of traffic of the Erie, received a letter from R. O'Hara, traffic manager of Swift & Company, in which the latter said in part:

> Our records indicate that for the year 1926, we sold your company only $5,000 worth of business (supplies for dining cars) at Jersey City and about $3500 worth at Port Jervis.

Mr. Gray wrote a letter to his purchasing department in which he said in part:

> The Atlantic Hotel Supply Company is a subsidiary of Armour & Company and the National Hotel Supply Company is a subsidiary of Swift & Company.
>
> Ottman & Company, from whom we purchased supplies to the amount of $10,845, is an independent concern and unable to assist us from a traffic standpoint.
>
> It is, therefore, recommended that Armour & Swift interests be patronized, all things being equal, and, if possible, a more equal division be made between Swift and Armour.

It was understood from the testimony that the recommendation was followed.

Packer Traffic and Ice

Over 100 letters and other records were introduced in the New York hearing dealing with contracts made by the Erie, Lehigh Valley and the Lackawanna for their supply of ice for cars and other purposes. The record involved several icing stations, not counting the New Haven's plant at Maybrook, N. Y., which received further attention. The arrangements were shown to have been influenced, if not dominated, from the outset or eventually by promises or expectations of the traffic of the packers.

The Lehigh Valley purchased two ice houses from Swift & Company during 1919; one at Mahoning, N. Y., and the other at Manchester which were maintained principally to supply natural ice for refrigerator cars at the prices then allowed by the tariffs. Improvements were made and, in 1925, the vice-president of accounting of the Lehigh Valley reported that during the first ten months of that year the operations at Mahoning had shown a net profit of $5,172 and the operation at Manchester a net profit of $33,900 on a small investment. In 1927, E. J. Henry, western traffic manager of Swift & Company, wrote that R. O'Hara, traffic manager of Swift & Company, wanted to operate the plant at Manchester and a contract was made with the Continental Ice Company. When asked if he had talked about traffic with Mr. O'Hara, G. H. Foster, vice-president of operation, replied, "I hope I did; I was trying to get traffic."

The contract provided, among other things, that the Lehigh Valley would haul the ice required to fill the plant free of charge from junction points on its line, while the contractors agreed to furnish without expense to the road all records required and to pay for delays to the road's equipment used in hauling the ice. It was brought out that the road had previously hauled the ice for the plant from Cayuga, a distance of 35 miles from Manchester, and during 1928 when it became necessary to haul additional ice to the plant, the general manager sought to have the ice hauled from Cayuga where the road had an excess, but the contractors had their own ice hauled from Buffalo, a distance of 87 miles. It was also shown that after commencing to operate the plant, the contractors effectively objected to maintaining the clerical force desired by the road; also that after some controversy, demurrage charges accruing in 1930 were waived.

Shortly before the icing question at Manchester arose, the western traffic manager of the Lehigh Valley also telegraphed the vice-president of traffic that R. O'Hara wanted to supply the road's requirements around Jersey City and New York Harbor from the new Seaboard Terminal facilities in which he was "interested." The ice was being supplied by the Mountain Ice Company under a contract which could be terminated on 30 days' notice. Three weeks after R. O'Hara broached the subject, the contract with the Mountain Ice Company was cancelled, "not because of any dissatisfaction with their services," wrote the acting vice-president, but to get competitive bids.

The first bid received from the Seaboard Company was $4.25 per ton for bunker ice as compared with $4.00 per ton quoted by the Mountain Company, but this was reduced to $4.00 and the contract awarded to the Seaboard firm. Mr. Foster said that the traffic of Swift & Company which the road had already had or hoped to get was considered in making this contract. He knew that the ice came from the Erie lines and, by agreement, was hauled free on the Lehigh Valley, a distance of five or six miles, but he was not informed as to the amount of switching charges and demurrage which the agreement waived.

Hornell

At Hornell, N. Y., the road has been using artificial ice supplied by the Hornell Ice & Cold Storage Company in which R. O'Hara was interested. During 1929, the general manager reported that besides the charges for ice which the Erie could recover from shippers, the road was subjected to out-of-pocket expenses amounting to $58,400 per year for switching, $2,000 per year for inspection, and $10,388 for billing and collection expense—or a total of $70,000 per year more than it could recover from the shippers. The value of the ice supplied during that year, approximately, was $175,000.

In another letter, the general manager again proposed that the road should seek a reduction in the cost of ice at Hornell and also Marion, Ohio, stating that the minimum of $2 which could be charged every car inspected, allowed the ice company $18,340 over the actual tonnage of ice delivered to cars at two points, and that the Erie paid the contractors $41,000 for ice at $15 per ton which the stores department found cost about $5 per ton. He also complained about paying $3 per ton for car load ice while other concerns were charging only $2.50 per ton for similar service in other territories. The rates had not been changed by June, 1930.

Salamanca

On December 28, 1929, the Hubbel Ice Company, a local dealer at Salamanca, N. Y., offered to furnish ice day or night, as required, at a cost of $2.95 per ton delivered. The Hornell Ice & Cold Storage Company offered to supply the ice at the price of $2.75, f. o. b. Hornell, which the road would then haul to Salamanca.

a distance of 81 miles, and it received the contract. It was stated in the letters that it would "cost practically nothing to haul the ice," and it was stated by D. L. Gray, vice-president of traffic, when testifying, that this was because of the preponderance of empty cars westbound. He was asked, if it would not cost something to move the ice in these cars and his attention was directed to notations on one of the letters where a transportation charge of 48 cents per ton had been added to the rate of $2.75 per ton quoted by the Hornell company which brought the delivered cost of the ice to $3.23 per ton as compared with the cost of $2.95 per ton quoted by the local dealer. In other letters it was shown that special cars were used for the haul and the ice was subject to about 20 per cent shrinkage.

The exhibits showed that R. O'Hara and W. J. Sinek were also behind the Seaboard Terminal & Refrigeration Company, which had established an ice manufacturing plant in connection with the cold storage facility built on Erie tracks at Jersey City in 1926, and with which the Erie contracted for all of its icing requirements. The government was interested in letters relating to the waiving of certain freight charges on ice hauled, a supplementary contract giving employees of the Seaboard company free transportation in the terminal; also letters written in 1927 in which a local dealer had offered to load team track cars with ice at $4 per ton, as compared with the contract price of $6 per ton.

A Secret Rate for Switching

It was shown that the Erie was notified in 1927 of the contract made by the New York, New Haven & Hartford with the Continental Ice Company to manufacture ice at Maybrook, N. Y., and that at the instance of R. O'Hara provision was made by the Erie to secure the ice for Port Jervis, several miles away, from the Continental Ice Company. A report was made to the effect that a price of $2.34 per ton at Maybrook would equal the cost of the ice then being supplied at Port Jervis by a local contractor, the estimate allowing for shrinkage and the cost of transportation. The contract was made for ice at $2.60 per ton from the Continental Ice Company. The price of car lots of ice to the New Haven from this plant was $3. The letters brought out that the question of switching the ice to the Erie at Maybrook arose and the New Haven established a rate of $5 per car to switch the ice, but did not publish the rate, because, as explained by D. L. Gray, the rate was lower than the tariff switching rate.

It was shown that the Delaware, Lackawanna & Western became interested in an icing proposal presented by the City Ice & Fuel Company in 1925 for icing at East Buffalo. The cost of icing at the time was considerably below that proposed but, when consideration was given to the ultimate necessity of rebuilding the ice house, it was decided to contract with the Empire State Ice Company, a subsidiary of the City Fuel & Ice Company for 20 years. In a letter dated October 3, 1925, G. J. Ray, chief engineer of the Lackawanna said, "If we will gain any traffic by contracting our icing operations, it is my recommendation that the contract be made under the best possible terms."

Purchases on the Lehigh

H. J. McQuade, purchasing agent of the Lehigh Valley, was questioned about a letter in which the traffic department of that road had reviewed the list of bidders for pipe fittings and valves and recommended that certain names be retained on the list and others be removed. One of the objectionable firms was the Kennedy Valve Company which was removed from the list. Subsequently a division freight agent of the road writing to the assistant general freight agent, said in part:

> On April 17, 1929, we received a letter as to the traffic value of certain concerns. . . . . We advised that the name of the Kennedy Valve Company could be eliminated for the reason that we had not been favored with but very little of its business. A little later we hinted to the Kennedy people that we had taken this action and received a letter from the sales manager. A conference was held and we frankly stated that when the company could show us some traffic, we would feel more inclined to co-operate with purchases.
>
> During the last six months we were favored . . . . . Now that Mr. March has kept his word, I would like to see the name restored.

The name was restored three days later.

Mr. McQuade said that competitive bidding is followed in most of the road's purchasing but the wishes of the traffic department determine largely what firms may receive orders for material. The lists of bidders are submitted to the traffic department for periodic revision and firms not recommended by that department are dropped unless for some special reason. The bids are also shown to the traffic department which designates the favored bidder or bidders and the purchasing department awards the business to correspond, if the favored shipper can be prevailed upon to meet or better the lowest bid. The transportation cost to the road is considered but not the haul on the Lehigh Valley in this competition.

In the majority of cases where a favored shipper has been named, Mr. McQuade said he names the figure which the favored bidder must meet, having in mind the bids of other firms, but does not divulge the low bidder's name. When asked if the inquiries for bids were often sent out only as feelers, he replied, "yes," adding that it was common to decide with whom the order would be placed before the requests for bids were sent out. If the favored bidder refuses to meet the lowest bid, however, he said, the low bidder will receive the order.

All the road's requirements of rail and cement, he explained, are filled by firms located on the Lehigh Valley. The Texas Company was selected for traffic reasons but met the lowest price which had been quoted by the other firms which had been allowed to bid.

Mr. McQuade said it would be more ideal if the road's purchasing were freed from traffic considerations.

Coal Buying

The coal for the Lehigh Valley is purchased by F. H. Moser, who is also the coal traffic manager. The latter testified that the road no longer buys its coal under term contracts but, instead, buys a week's supply at a time and distributes the orders among a selection of producers and brokers in accordance with the best prices offered and the traffic. The downward trend of prices has not required contract buying for several years, he said, and the present method is advantageous for traffic reasons. Each week's requirements are divided among from 35 to 40 firms and the bulk of the orders are placed with brokers and wholesalers rather than producers, because that class of firms, he said, are in a better position to do more for the road in the way of traffic than the producers, some of which may be selling all their coal to a railroad.

A record is kept of the tonnage received from the larger concerns but the amount of traffic is not stipulated. Most of the coal reaches the road over the Pennsylvania and by consigning the coal to a definite destination on the Lehigh Valley instead of the junction point, the road gets a division of the through freight rate which is from 21 to 22 cents in its favor.

J. Duffy, vice-president of traffic of the Lehigh Val-

ley, considered it a short-sighted policy that would induce a road to favor competitive traffic at the expense of the home industries. He also advocated the payment of a premium, explaining that it was sometimes in the interests of the road and the development of its industries to pay a little higher price. When asked about the propriety of a premium that would assure the road a large volume of competitive traffic, he added that it should be so if other lines paid a premium to get traffic away from the Lehigh Valley, particularly roads with larger purchasing power, which he agreed might affect the road seriously.

Traffic Brokers

Several letters showed that the Chas. R. Long, Jr., Company of Louisville, Ky., had also obtained control of the traffic of an eastern milk shipper, and that of certain wool growers. On November 11, 1929, E. S. Depass, vice-president of a paint company, wrote a letter to the assistant freight traffic manager of the Erie and a copy to the purchasing agent in which he said in part:

> It is my pleasure to enclose a list of carload shipments of Carnation Milk Products Company, which includes those of the Mohawk Condensed Milk Company, that were routed over the Erie.

Another letter was written on the same day in which E. S. Depass said in part:

> I am handling traffic matters for S. Silberman & Sons, wool dealers at Chicago, in addition to my other duties and enclose a list of wool shipments . . . . . all of which is competitive.

The nature of the request made upon the purchasing department when these letters were written was shown by the following statement from a letter received by the purchasing department.

> In lieu of this activity on our part we are wondering if you cannot make it possible for us to receive a greater portion of the Erie's paint requirements.

F. E. Driscoll, purchasing agent of the Erie, said that the firm had received a few orders for front end paint during past years, but the mechanical department had approved it.

Erie Purchasing

Mr. Driscoll was not prepared to answer some of the questions put to him, having been purchasing agent only since the death of the general purchasing agent a few months ago. The purchasing of materials on the Erie, he testified, was based largely on the recommendations of the technical departments and when quotations are received from manufacturers, they are submitted to those departments. The purchasing department, he further explained, does not make a practice of asking the representatives of supply firms about their traffic and the traffic department does not as a general rule initiate recommendations. The traffic of supply firms is not disregarded, however, it being common to call up or write the traffic department for recommendations in placing some orders.

It is not unusual to give a shipper the chance to revise its bid and where the delivered price is equal between two firms, preference is given to the firm whose routing will give the Erie the largest proportion of the through rate. He said the Erie did not award orders to firms at a premium because they had traffic and the traffic department handles the routing. No distinction is made between wholesalers and producers in purchasing lumber but if "everything else is equal" the orders are placed with "the fellow who gives us the traffic."

D. L. Gray, vice-president of traffic on the Erie, testified that the Erie does not direct requests to shippers for reports of their traffic, such information being developed where desired by the local representatives. Definite understandings are sometimes made with shippers before the traffic department recommends purchases from them. He agreed that sometimes the only way to satisfy shippers is to give them orders for materials. He said that a great deal of time was given to getting competitive traffic, adding that such traffic is the principal job of all the off-line agencies. He said he did not know how Mr. DePass got control of all the traffic he represented, and he disclaimed any knowledge of the interest of R. O'Hara in the Durable Draft Gear and the relation between the Union Draft Gear Company's draft gear and the traffic of the Grigsby-Gruno Company at the time these gears were purchased. He testified that the consideration is given both to the traffic the road has and the traffic it may possibly get when recommending purchases but left the question of transportation costs of material to other departments.

Erie Coal

L. L. White, assistant to the president of the Erie, said that the Erie buys most of its coal under contracts at prices which are established by the road for the different districts from which it comes. Some of the coal is produced from mines in which the Erie is interested and some of it from sales agencies, including the Peabody Coal Company, which is reported to be affiliated with the Insull interests. A reasonable price allowed, and the amount of traffic the shipper can route over the Erie is involved in placing the contracts. The traffic question also arises in placing rail and lubricant contracts. The Erie was asked to produce the details and it was understood that a further examination of Erie officers including the former president, J. J. Bernet, will be conducted at a later hearing.

D. L. & W. Firm

C. C. Hubbell, purchasing agent of the Delaware, Lackawanna & Western, told the commission that when the names of firms are removed from the road's list of bidders, it is because such firms have failed to provide satisfactory materials or have repeatedly quoted excessive prices and that in all his 20 years of experience as purchasing agent of that road he did not recall that a firm's name was removed for traffic reasons. He said that it had been the practice for a good many years to ask the traffic department for its recommendations in awarding contracts and also to furnish that department with copies of all purchase orders, but the traffic department's recommendations are secondary, even in connection with coal buying.

The lowest bidder will not get the order, he said, unless the quality of the material he offers is satisfactory to the department requiring it. Neither is a premium ever paid for traffic. "That," he said, "would be against my policy of buying." Where traffic is involved, a shipper may be asked if he cares to revise his bid, but he is not told what to bid. "We have been very firm," he said. "We might split the business, as where an industry on our line is involved, but that is not often. In practically all cases the original low bidder offering acceptable material gets the contract."

He testified that the road buys most of its supplies on its own line with the exception of lumber, coal and lubricants. While the lumber is chiefly purchased through brokers, this is not because of their traffic, he said, but because the small amounts of lumber purchased are not usually attractive to the mills. In making such purchases, the off-line freight is considered as a part of the cost which usually means that the closest firms geographically get the orders. The Standard Oil Company of New Jersey has the contract for equip-

ment lubrication because the oil was satisfactory to the mechanical department and because the company was the lowest original bidder. The coal is no longer purchased on the basis of competitive bidding, he explained, but at a price which the road decides is fair to the coal industry, as well as to the road. As much of the coal is purchased from local mines in which the road is interested as such mines can handle. All rails are purchased from the Bethlehem Steel Company which is located on the road and cement from local mills.

C. Campbell, vice-president of traffic of the New Haven, and C. E. Smith, vice-president of purchases, were recalled to produce further information concerning that road's activities and W. J. Landon, general freight agent, and J. L. Manning, former agent, were also present. Mr. Manning, having handled all the details connected with the coal purchasing on the New Haven for many years, discussed the differences in the coal produced in the several districts from which the road's supply had been obtained as well as the reliability, in the period covered by the correspondence, of the various mines with which the road had negotiated or refused to negotiate. During his testimony, the attorney called his attention to a letter in which the New Haven had insisted that a certain producer uses New Haven equipment exclusively for New Haven coal and he was also asked if one advantage of having the coal mined on the Pennsylvania was because that road might have waived per diem charges; but he did not know and C. E. Smith testified that per diem charges were seldom waived as far as he knew.

Way Bills and Rate Divisions

C. E. Smith produced the records of the New Haven coal contracts for 1930 which showed that the road is getting its requirements for the year from 18 firms who are procuring the coal from 9 producers, and which also showed tonnage produced from mines on the Baltimore & Ohio and that from mines on the Pennsylvania, the tonnage moving over the latter having increased from 237,000 tons in 1927, 338,000 tons in 1928, 745,000 tons in 1929, to 905,000 tons in 1930. Mr. Smith produced a map which showed that certain mines on the Pennsylvania were closer to the New Haven than mines on the Baltimore & Ohio and the coal therefore took a lower through freight rate so that when the coal operators in the Pennsylvania district reduced their mine prices as much as they did in 1930, it was still possible to pay those mines slightly more than was paid to the mines in Baltimore & Ohio territory without inflating the delivered cost.

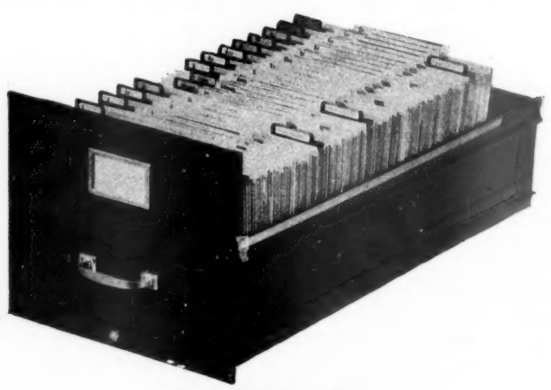
Mr. Landon's testimony showed that while the coal routed either via the Baltimore & Ohio or the Pennsylvania was billed to the New Haven's yard at Maybrook, N. Y., for subsequent reconsignment to points of use on the New Haven's lines in New England, the road got the benefit of a through freight rate into New England by scratching out the name Maybrook on the waybills as the cars were shipped from Maybrook into New England and marking in the name of the new destination.

It was also brought out that because the distance from Maybrook to the final destination of a car comprises a larger proportion of the total distance from mines in a coal rate district which is served only by the Pennsylvania, than it comprises of the total distance from mines in the coal rate districts which are served by both Pennsylvania and Baltimore and Ohio, the through billing at Maybrook gives the New Haven a larger division of the through rate on coal which the Pennsylvania hauls from the district not served by the Baltimore and Ohio.

After further questioning of the New Haven officers, during which it was shown that the E. I. Du Pont Company was reporting the combined traffic of all its subsidiaries and associated companies to the New Haven in the interests of the sales of any one, and the New Haven had given consideration to the free storage of automobiles at Boston to get certain business from another road, the examiners concluded the New York hearing and took a recess until 1931. It is understood that hearings will then be held in St. Louis, Cleveland, Detroit, Philadelphia and possibly Boston, while a second hearing will be held both in Chicago and New York.

Remington Rand Offers Two New Filing Systems

TWO new methods of indexing and vertical filing, flexible to meet economically the increasing complexity of present-day files and providing new speed through use of color, are being offered by Remington Rand Business Service, Inc. The first is known as "Variadex"—a new direct expanding index, offered in letter, bill and legal sizes. In its general plan of tab positions, this system is similar to the direct alphabetic system. It maintains the familiar sectional arrangement for guides and individual and miscellaneous folders. The second is called "Triple-Check Automatic"—an arrangement of captions and sub-divisions so that they become automatic in operation. It is asserted of this system that it is particularly rapid and economical in operation. Color provides a third check for accuracy.



The Variadex File

These new systems utilize new captions, arranged after careful research had found the answer to such questions as—What proportion of names begin with A, B, C, D, etc.? Among the A's, how many are Aa, Ab, Ac, Ad, Ae? How important are common names like Smith and Jones, American and National.

Either system can be started with a small list and expanded scientifically. A feature of the Triple-Check Automatic system is the secondary key, designed to fit the distribution of modern names. This also contemplates the variance with which certain names will predominate in various sections of the country.

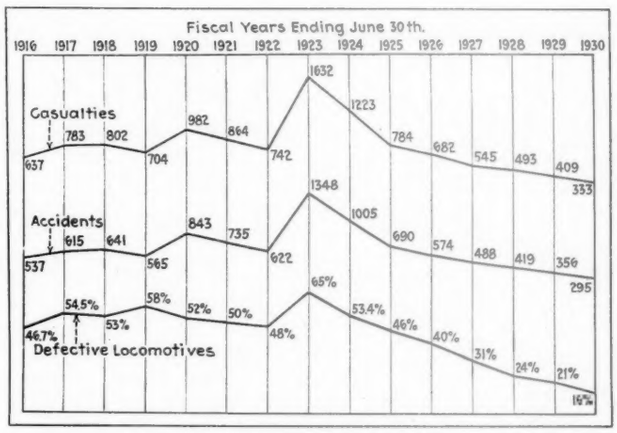
Variadex provides a guiding plan arranged to permit expansion and adjustment—modern captions; a color plan to promote speed and accuracy; a second position available for adjustment of guiding; elimination of alternate guide tab positions and of numbers.

Annual Report of Bureau of Locomotive Inspection

Only 16 per cent of locomotives inspected found defective—Accidents with resultant casualties continue to decline

THE nineteenth annual report of A. G. Pack, chief inspector, Bureau of Locomotive Inspection, to the Interstate Commerce Commission, once again showed a continuation of the gradual decline in the number of locomotives found defective, and ordered withheld from service. This steady improvement in the condition of locomotives in the United States, as indicated by Mr. Pack's annual reports, began with the fiscal year ending June 30, 1923, for which period 65 per cent of the locomotives inspected were found defective and a total of 1,348 accidents and 1,632 casualties were reported. These figures were the highest recorded since 1916, when the Bureau of Locomotive Inspection began the record shown in the chart.

In the seven years since 1923, locomotives found defective have been steadily reduced to 16 per cent, accidents to 295 and casualties to 333. Following is an abstract of the report:



The Relation of Defective Steam Locomotives to Accidents and Casualties Resulting from Locomotive Failures

Mr. Pack's Report

A summary of all accidents and casualties to persons occurring in connection with steam locomotives compared with the previous year shows a decrease of 17.1 per cent in the number of accidents, a decrease of 31.6 per cent in the number of persons killed, and a decrease of 17.9 per cent in the number injured during the year.

Some of the carriers are maintaining their locomotives in condition approaching perfection while others are delinquent in this respect. The average percentage of locomotives on all railroads found defective has steadily decreased over a period of years reaching the low point of 16 per cent for the year ended June 30, 1930. Improved standards of maintenance reflected by the reduced percentage of defective locomotives have brought about the greatest degree of safety of locomotive operation ever attained.

Steam Leaks Around the Head End of a Freight Locomotive Marked O.K. for Service

Boiler explosions caused by crown-sheet failures continue to be the most prolific source of fatal accidents; 84.6 per cent of the fatalities during the year were attributable to this cause as compared with 68 per cent in the previous year. However, there was a decrease of 35.3 per cent in the number of such accidents, a decrease of 15.3 per cent in the number of persons killed, and a decrease of 35 per cent in the number of persons injured as compared with the previous year.

Number of Persons Killed and Injured in Steam Locomotive Accidents

	1930		1929		1928		1927		1926	
	K'd	In'd	K'd	In'd	K'd	In'd	K'd	In'd	K'd	In'd
Members of train crews										
Engineers	4	100	7	128	8	151	8	181	5	210
Firemen	4	123	7	128	11	161	9	179	6	230
Brakemen	4	32	1	45	4	54	4	51	3	77
Conductors	—	10	—	24	—	16	—	25	2	28
Switchmen	—	10	1	11	—	15	1	13	—	19
Enginehouse and shop employees:										
Boiler makers	—	1	—	5	3	5	—	11	—	5
Machinists	—	3	—	2	2	4	1	5	—	5
Foremen	—	1	—	1	—	1	—	1	—	3
Inspectors	—	3	—	1	—	1	—	—	—	—
Watchmen	—	2	—	3	1	2	2	4	1	5
Boiler washers	—	2	—	1	—	—	1	2	—	2
Hostlers	—	3	—	5	—	10	1	7	—	9
Other enginehouse and shop employees	1	8	1	3	—	8	—	10	1	15
Other employees	—	6	2	10	—	12	1	9	3	10
Nonemployees	—	16	—	23	1	23	—	19	1	42
Total	13	320	19	390	30	463	28	517	22	660

The increasing size of locomotive boilers and the high pressures carried therein tend to increase the violence of explosions and cause increase in the fatalities per accident and increase in the seriousness of injury to those who are exposed and survive. Attention is again directed to the necessity for the use of the safest and strongest practicable firebox construction, including the use of reliable boiler feeding and water-level indicating devices.

Eleven suits for penalties, involving 241 counts for alleged violations of the Locomotive Inspection Law and Rules, were pending in the various district courts at the beginning of the year. Information of violations was lodged with the proper United States attorneys in three cases, involving 39 counts. Judgments in favor of the government were obtained in 11 cases, involving 236 counts; 107 counts were dismissed by stipulation or agreement and penalties imposed on 129 counts in the sum of $12,900. Three cases, involving 44 counts, were pending in the district courts at the end of the year.

Accidents and Casualties Caused by Failure of Some Part of the Steam Locomotive, Including Boiler or Tender

	1930	1929	1928	1927	1926	1925
Number of accidents	295	356	419	488	574	690
Per cent increase or decrease from previous year	17.1	15	14.1	14.9	16.8	31.3
Number of persons killed	13	19	30	28	22	20
Per cent increase or decrease from previous year	31.6	36.6	[1]7.1	[1]27.3	[1]10	69.7
Number of persons injured	320	390	463	517	660	764
Per cent increase or decrease from previous year	17.9	15.8	10.4	21.6	13.6	33.9

[1] Increase.

The part of the commission's order dated February 21, 1929, promulgating Rule 118, applying to equipment of new locomotives with mechanically-operated fire doors, together with the provision applicable to maintenance of fire doors became fully effective on April 1, 1929, and the part of the order applying to equipment of existing locomotives with mechanically operated fire doors when receiving classified repairs became fully effective on July 1, 1929. The terms of the order are being generally complied with. However, some of the mechanically-operated fire doors that were at first applied as a result of the order contained inherent defects that precluded proper operation; these are now being replaced by fire doors that are apparently satisfactory.

TWO LOUNGE SLEEPING CARS equipped with buffet and soda fountain have been added to the equipment of the "New Englander" which runs between Montreal, Que., and Boston, Mass., over the Canadian National and the Central Vermont. The cars are named the "Mount Mansfield" and the "Mount Royal," the former after the highest peak in the Green Mountain range and the latter after the historically famous mountain on the Island of Montreal.

* * *

At the Union Station, Indianapolis, Ind.

River and Canal Traffic Declined in 1929

By Harold F. Lane

Washington Editor, *Railway Age*

WASHINGTON, D. C.

STATISTICS for another year of waterway traffic just made available show that while the total water-borne commerce of the United States, including that of the ports and the Great Lakes, has been growing steadily and was 8.2 per cent greater in 1929 than in 1928, the total ton-mileage of the inland waterways, exclusive of the Great Lakes, was not only 7 per cent less than in 1928 but was also 9.2 per cent less than in 1926 and 3.3 per cent less than in 1927. The new statistics for the calendar year 1929 have been made public in the annual volume of commercial statistics of water-borne commerce compiled by the Board of Engineers for Rivers and Harbors, which is Part 2 of the annual report of the chief of engineers, U. S. Army, for the fiscal year 1930.

While the tonnage figures for the rivers, canals and connecting channels continue to show increases, an examination of the ton-mileage figures shows a different story. The difference is especially attributable to the decline in traffic on the Mississippi river system, the center of the government's waterway program, which experienced a decline, partly due to low water, before the depression began. While this also has shown a steady increase in tonnage in recent years up to 1928, the 1929 tonnage was less than that in 1928 and the 1929 ton-mileage of the system was less than that of 1928, 1927 or 1926. The 1928 ton-mileage was also less than that for 1926.

An introductory paragraph in the report for 1929 gives a separate statement of the total ton-mileage on the inland waterways, exclusive of the Great Lakes, as 8,660,420,414. A similar figure is not given for earlier years but it is readily obtainable from a table published in the reports each year of the freight carried on the inland waterways by systems, including the Great Lakes. The total for 1929 was 105,982,780,414, as compared with 96,514,434,274 for 1928. Of this 97,322,360 ton-miles represented Great Lakes traffic as compared with 87,178,118,000 in 1928, and the ton-mileage of the rivers, canals and connecting channels was 8,660,420,414, as compared with 9,336,316,274 in 1928.

For 1927 the total, exclusive of the Great Lakes, was 8,961,109,378. For 1926 it was 9,542,876,905. For 1925 it was 8,417,052,000. The increase from 1925 to 1929, exclusive of the Lake traffic, was just 3 per cent, whereas the revenue ton-mileage of the railways increased 7 per cent in the same period. For 1929 the waterway traffic, exclusive of the Lakes, was less than 2 per cent of that carried by the railways.

As stated, the decrease was mainly in the traffic of the Mississippi river system, which amounted to 4,982,630,693 ton-miles in 1929 as compared with 5,662,742,961 in 1928. The ton-mileage of the Atlantic coast rivers also showed a reduction to 1,343,198,863 ton-miles in 1929 as compared with 1,419,241,730; while that of the Gulf coast rivers was 475,569,107, as compared with 436,769,812; that of the Pacific coast rivers was 776,745,040 as compared with 733,846,161; other waterways, 9,716,565, as compared with 13,738,734; canals and connecting channels, except Great Lakes, 1,072,560,146 as compared with 1,069,976,876. The ton-mileage

for the Mississippi system was 5,553,911,687 in 1927; 5,880,126,800 in 1926, and 4,504,041,000 in 1925.

The decrease shown for the Mississippi system was entirely on the Mississippi proper, where much difficulty was experienced in 1929 on account of low water, as increases were reported for the Ohio river system, including the Monongahela, and on the Missouri. It is probable that a further reduction will be shown for 1930 because of the drought.

After eliminating all known duplications of traffic as between ports, rivers, canals, and connecting channels, the net total water-borne commerce of the United States in 1929 amounted to 583,800,000 tons as compared with 539,200,000 in 1928. The gross commerce of the ports on the Atlantic, Gulf and Pacific coasts and at United States ports in the Great Lakes amounted to 834,305,876 tons. After eliminating all known duplications, the net tonnage was 519,870,279, as compared with 480,919,944 in 1928.

The gross total domestic United States commerce of the Great Lakes was 277,023,469 tons, as compared with 245,080,743 in 1928 and the net total domestic traffic was 141,185,669 tons, as compared with 125,779,900 in 1928, while the net total commerce, including foreign and domestic traffic, but excluding traffic pertaining exclusively to Canada, was 161,344,261 tons, as compared with 149,706,670 in 1928.

Inland Waterway Traffic by Systems

	Tons		Ton-Miles	
	1929	1928	1929	1928
Atlantic Coast Rivers	26,168,738	24,732,385	1,343,198,863	1,419,241,730
Gulf Coast Rivers	8,715,890	7,142,253	475,569,107	436,769,812
Pacific Coast Rivers	23,488,430	22,472,238	776,745,040	733,846,161
Mississippi River system	78,117,545	79,794,356	4,982,630,693	5,662,742,961
Interior Rivers and Other Waterways	980,228	876,046	9,716,565	13,738,734
Total Rivers	137,430,831	134,141,232	7,587,860,268	8,266,339,398
Canals and Connecting Channels (except Great Lakes)	145,130,807	127,905,647	1,072,560,146	1,069,976,876
Total Rivers, Canals and Connecting Channels	282,561,638	262,922,925	8,660,420,414	9,336,316,274
Great Lakes System (net)	161,344,261	149,706,670	97,322,360,000	87,178,118,000
Total Inland Waterways	.....	.....	105,982,780,414	96,514,434,274

The total bulk freight on the rivers, canals and connecting channels amounted to 264,869,602 tons, against 248,199,213 in 1928, of which 243,475,608 tons were of a miscellaneous character, of an average value of $8.38 per ton, and 21,393,994 tons were floated and rafted, with an average value of $4.73 per ton. The package freight amounted to 17,692,036 tons, having an average value of about $128 per ton. The gross total commerce on the rivers, canals and connecting channels was 282,561,638 tons, as compared with 262,922,925 in 1928, and after eliminating all known duplications, the adjusted total was 245,894,000 tons, as compared with 227,300,000 in 1928. In 1927 the gross total was 253,646,914; in 1926 it was 243,630,927, and in 1925 it was 227,704,122.

The ton-mileage of the canals and connecting channels, although showing an increase in 1929 over 1928 and 1927, was less than in 1926, when it was 1,724,000,000. The total river commerce was 137,430,831 tons in 1929 and 134,141,232 in 1928, while the total for canals and connecting channels was 145,130,807 tons in 1929 and 127,905,647 in 1928.

The gross traffic on the Mississippi river and its tributaries, including the Ohio river system, amounted to 78,117,545 tons, as compared with 79,794,356 in 1928. After eliminating all known duplications, the net total tonnage was 61,893,916, as compared with 62,500,000 in 1928. In 1927 the gross traffic was 75,674,305; in 1926 it was 77,036,480, and in 1925 it was 67,531,478.

The gross traffic on the Mississippi from Minneapolis to New Orleans amounted to 14,281,039 tons, against 18,476,509 in 1928, and the net total traffic, eliminating overlapping of tonnages over the four separate stretches of the river, was 11,695,982 tons. In 1926 the gross traffic on the river was 19,225,072 tons. Traffic on the Mississippi between Vicksburg and New Orleans, according to the report, has been steadily declining since 1926, when it was 11,074,488 tons, to 8,654,626 in 1928 and 7,727,383 in 1929. That between Memphis and Vicksburg shows the same tendency, having decreased from 4,792,780 tons in 1926 and 4,803,840 in 1928 and 2,835,060 in 1929. That between Cairo and Memphis increased up to 1928, when it was 2,531,256, but was only 2,328,334 in 1929.

The Inland Waterways Corporation in its annual report for 1929 attributed much of the decline in that year to low water in the Mississippi and some of it to the increase of private operation on the river, but the 1928 ton-mileage was less than that in 1926. The chief engineer's report this year omits ton-mileage figures for the corporation.

The gross total traffic on the Ohio and its tributaries amounted to 60,968,728 tons in 1929, as compared with 58,573,535 in 1928; and the net total tonnage was 47,476,132 as against 46,034,000 in 1928.

The tonnage of the Ohio river, Pittsburgh to Cairo, for 1929 was 21,955,148 tons, an increase of 4.8 per cent over that of the preceding year. A still greater increase was shown in ton-mileage, which reached 1,512,584,740 in 1929, or 12.4 per cent more than that of 1928. Omitting sand and gravel the increase in tonnage was 8 per cent and the average haul increased from 100 to 104.7 miles, but the average haul for the total tonnage increased from 64.3 to 68.7 miles. Coal continues as the largest commodity movement and represented 50 per cent of the ton-miles. On the Monongahela the total tonnage in 1929 was 28,907,614, an increase of 5.4 per cent over that of 1928. Coal constituted 80.2 per cent of the total. The ton-mileage was 1,147,434,348, as compared with 1,134,655,864 in 1928.

On the Missouri river the tonnage was 1,372,394 in 1929 and 987,700 in 1928.

On the Mississippi river itself the tonnage and ton-milage was distributed between the various stretches as follows:

	Tons		Ton-Miles	
	1929	1928	1929	1928
Minneapolis to Cairo	1,390,262	2,486,787	148,399,017	199,211,502
Cairo to Memphis	2,328,334	2,531,256	374,039,481	418,021,125
Memphis to Vicksburg	2,835,060	4,803,840	524,125,194	772,641,852
Vicksburg to New Orleans	7,727,383	8,654,626	983,571,896	1,536,950,871
Total	14,281,039	18,476,509	2,030,135,578	2,926,825,350
Net total	11,695,982	.....	.....	.....

The New York Barge canal showed a decrease in tonnage from 3,089,998 in 1928 to 2,876,160 in 1929. An increase has been reported during 1930.

The report of the chief of engineers for the fiscal year ended June 30, 1930, shows that 930 river and harbor projects were in force during the year, including 50 canals and waterways which, with their locks and dams, are maintained and operated by allotments from the permanent indefinite appropriation of March 3, 1909. In addition, the river and harbor act of 1930 authorizes work on 175 new, or modifications of existing

projects, the estimated further cost of the work thus authorized being approximately $146,000,000. The total amount expended on rivers and harbors for the fiscal year was $100,746,269, the expenditures for this class of work being approximately 30 per cent greater than for the fiscal year 1929.

Chicago & Alton Bought For Baltimore & Ohio

THE Chicago & Alton, which has been in receivership since August 30, 1922, was sold at public auction in foreclosure proceedings at Wilmington, Ill., on December 11, to interests representing the Baltimore & Ohio, for $23,000,000. Douglas M. Moffat and Colin C. Ives, New York attorneys, acting jointly for the Baltimore & Ohio, were the only bidders, and the railroad was sold to them by Harbert A. Lundahl, special master in chancery, subject to the approval of Judge George A. Carpenter of the United States District Court at Chicago on or before January 8, 1931.

The auction occupied less than 90 min., 50 min. of which were taken up with the reading of the notice of sale. The sale was attended by practically every executive officer of the Alton, including William G. Bierd and William W. Wheelock, receivers, and Joy Morton, one of the oldest directors of the road, and by George M. Shriver, senior vice-president of the Baltimore & Ohio, acting for Daniel Willard, president, and H. B. Voorhees, vice-president of the road at Chicago.

As purchaser of the Chicago & Alton the Baltimore & Ohio must assume obligations of the former road which fix the purchase price at a figure between $75,000,000 and $80,000,000. In addition to the sale price of $23,000,000, these obligations include $45,350,000, the principal amount of the 3 per cent first mortgage refunding bonds of the Chicago & Alton Railroad Company which were not in foreclosure, $3,276,000 of equipment trust notes, miscellaneous debts of the receivership, including $482,600 of unpaid income tax, and the costs of the receivership and foreclosure which are estimated at about $2,000,000.

A last minute attempt to halt the sale occurred on December 10 when attorneys representing the stockholders' protective committee, presented a petition to the federal court, which declared that Kuhn, Loeb & Co. had negotiated the sale of the $22,000,000 first lien 3½s at $80 per $100 bond and of the $16,834,000 general mortgage 6s at prices ranging from $223 to $230 per $1,000 bond to the Baltimore & Ohio at the expense of the stockholders equity in the property. Judge Carpenter denied the committee right to file the petition and to appeal to a higher court on the ground that the stockholders had not accompanied it with a reorganization plan. The stockholders plan to enter a protest before the Interstate Commerce Commission when approval of the purchase of the road is sought from that body.

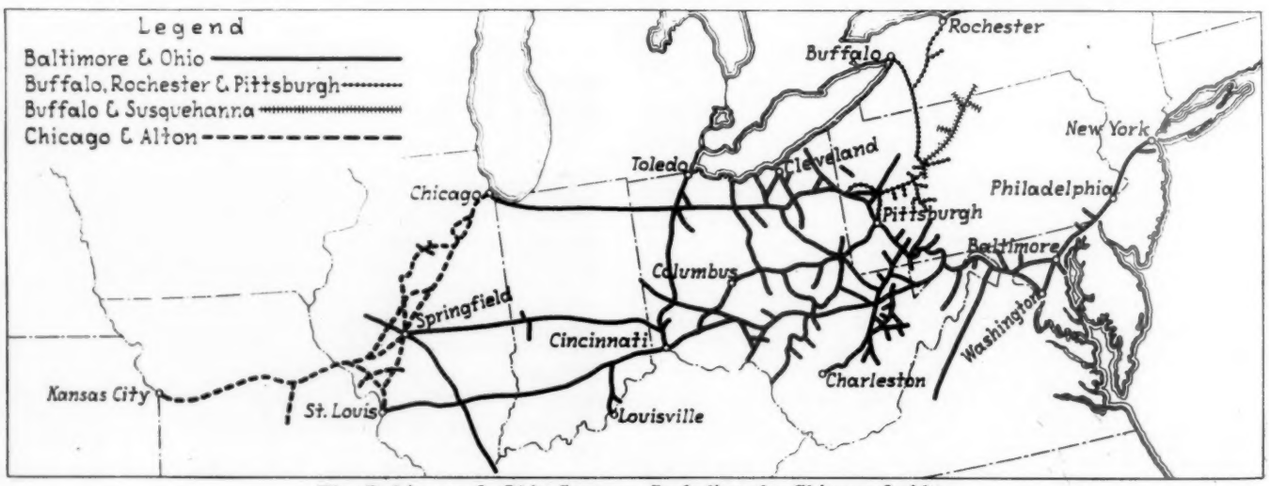
The Chicago & Alton was allocated to the Baltimore & Ohio System—No. 5 by the Interstate Commerce Commission plan for the consolidation of the railroads. A statement issued by officers of the Baltimore & Ohio declared that, if the court should confirm the sale and upon the completion of the other necessary legal formalities, the Alton would be operated as a unit of the B. & O. system. The C. & A. connects with the Baltimore & Ohio Chicago Terminal at Brighton and Argo, Chicago, and with the Baltimore & Ohio at Springfield, Ill., and East St. Louis. With the addition of the Alton's mileage the Baltimore & Ohio system mileage will be constituted as follows:

Baltimore & Ohio	5,637
Baltimore & Ohio Chicago Terminal	81
Buffalo, Rochester & Pittsburgh	602
Buffalo & Susquehanna	254
Chicago & Alton	1,028
Dayton & Union	47
Staten Island Rapid Transit	24
Total	7,673

The Baltimore & Ohio's chief interest in acquiring the Alton is in obtaining an entrance into Kansas City, Mo., with western connections at that point—the Union Pacific, the Kansas City Southern and the Atchison, Topeka & Santa Fe. Like the Wabash, the Baltimore & Ohio System will be provided with a route between Kansas City and New York via Springfield, which avoids the busy St. Louis gateway. This route, which is about 1,390 miles long, is one of the shortest between New York and Kansas City, and compares favorably with the only other route under one control which extends from New York to the Missouri river—the Van Sweringen lines via the Missouri Pacific, the New York, Chicago & St. Louis and the Erie.

The Alton, with the shortest route between Chicago and St. Louis, 284 miles, dominates the passenger traffic between those two cities. It has the second shortest route between Chicago and Kansas City, 483 miles.

The Alton is one of the oldest roads in the Middle West. The original charter under which it was operated was granted on February 27, 1847, to the Chicago &



The Baltimore & Ohio System, Including the Chicago & Alton

Keystone Photo

When the Baltimore & Ohio Bought the Chicago & Alton

Colin C. Ives and Douglas M. Moffat, New York attorneys representing the eastern road, are shown, left to right, presenting their bid of $23,000,000 to special master H. A. Lundahl, as W. G. Bierd, receiver for the Alton, looks on.

Mississippi. The Joliet & Chicago, extending from Chicago to Joliet, Ill., is leased in perpetuity, and with the Chicago & Alton proper forms the line between Chicago and St. Louis, which was opened as a through route in 1859. With the St. Louis, Jacksonville & Chicago, the Louisiana & Missouri and the Mississippi River Bridge, which are leased in perpetuity, the line was opened to Mexico, Mo., and Cedar City from Bloomington, Ill., in 1873. The Kansas City, St. Louis & Chicago, which is also leased in perpetuity, was opened from Mexico to Kansas City, Mo., in 1879.

The history of the Chicago & Alton during this century has been rather hectic. Prior to 1898 the road was for many years under the control of Timothy B. Blackstone, its president, and had paid an average dividend exceeding 8 per cent per year, and in addition had expended large sums out of earnings in the improvement of the property. On December 31, 1898, its value, including cost of road and equipment, $34,153,927 and other assets, $5,781,960, was $39,935,887, with total stock outstanding of $22,230,600 and a funded debt of $10,779,850.

At that time Edward H. Harriman, who was then president of the Oregon Short Line, and later became president of the Union Pacific, the Southern Pacific, the Texas & New Orleans and other western roads, Mortimer L. Schiff, George J. Gould and James Stillman formed a syndicate and bought the stock of the Alton for $39,042,200. In the seven years to June 30, 1906, according to a report of Interstate Commerce Commission issued in 1907, the outstanding capital indebtedness of the company was increased about $80,660,000, of which about $18,000,000 was expended in improvements and additions to the property.

The present company was incorporated in 1906 as a consolidation of the Chicago & Alton Railway and the Chicago & Alton Railroad. From 1907 to 1912 it was controlled by the Toledo, St. Louis & Western (now part of the New York, Chicago & St. Louis) with T. P. Shonts as president. Also under the same control were the Detroit & Toledo Shore Line and the Interborough Rapid Transit. Mr. Bierd became president of the Alton in 1914, and the control remained with the Toledo, St. Louis & Western until 1921 when the settlement of court litigation awarded the controlling stock interest to holders of collateral trust bonds.

At the time of the appointment of receivers in 1922 the road had been unable to meet all of the interest payments on its 6 per cent general mortgage bonds for several years. It was precipitated at that time by a decrease in earnings because of the coal strike and by the extra expense caused by the shop crafts strike. When the receivers were appointed on August 30, the mines on its lines had been closed for five months, entailing a heavy loss in revenue and at the same time making it necessary for the road to purchase coal for its own use at a price, including freight charges of two to three times the former price.

The foreclosure sale, with the actual transfer of the property to the Baltimore & Ohio early in 1931, marks the virtual close of a period covering 83 years of operation of the Alton as an independently managed property. While twice during its history it has been under the domination of other railroads and other interests these never involved any close physical consolidation, and were largely financial in their character.

Doings of Bureau of Safety

THE Bureau of Safety of the Interstate Commerce Commission, W. P. Borland, director, has issued an annual report of 23 pages, to which are added 60 pages of appendices, containing the usual tables.

This report is in the nature of a supplement to the annual report of the commission and some of its features were noted in the *Railway Age* of December 6, page 1222, in connection with the commission's full report.

Of the 1,361,040 freight cars inspected during the year, the number found defective was two per cent of the whole, the lowest percentage on record. Similar improvement is shown also in the inspection of passenger cars and locomotives. Airbrake tests, made on trains made up for departure from terminals, covered 113,583 cars, of which one per cent were found out of order. Observance of rules by the roads and intensive inspection by the government have resulted in a marked improvement of airbrake conditions. The extensive airbrake tests being made by the American Railway Association are still going on and road tests on the Southern Pacific in Oregon and California are now being made on trains of 50, 100 and 150 cars. Up to the end of September, 108 tests had been made of the FC-3 equipment. The American Railway Association has completed a full report of the tests made at Purdue University. The bureau is cooperating in tests soon to be made, at Purdue, of automatic train pipe connectors furnished by four manufacturers.

The commission has given permission for the testing on box cars, of running boards made of material other than wood.

The reports of the railroads showing cases of excessive hours of service by trainmen and telegraphers for the year ended June 30, show a total of 16,912 cases, a decrease of 6,029 compared with the previous year. A five-year table shows a steady decrease in the number of cases of excess service. Excess service by telegraphers also shows a large decrease, and 78 per cent of all instances were due to sickness and death of employees or in employees' families.

The report reviews the doings of the bureau in connection with automatic train control during the year, and final approval has been given of 30 installations.

Table No. 8 shows, for each road, for one year, the

total number of operations of automatic train control apparatus; the total number of proper operations; total false restrictive operations; total false proceed operations, and other data. Of 178 million operations the number of false restrictive operations was 50,513 and the number of false proceed operations was 38. This last number indicates an average of one in 4,700,000. Thirty-five roads report no false proceed operations.

Experiments have been made on the Boston & Maine embracing studies looking to the standardization of train control devices with the hope of making interchangeability practicable.

The report recounts the action of the commission on requests from six different roads for modifications in the requirements of the government as regards automatic train control operation. Notes are given on six derailments and five collisions which occurred during the year on lines having automatic train control. In most of these cases the integrity of the train control system was not in question, but there were three in which the trouble was due to some fault or failure in apparatus on the locomotive.

One case is reported of a derailment prevented by automatic train control: A locomotive had been detached from its train; the fireman had gone forward to flag on the adjacent track, and the engineman left the cab to go to a telephone; he had closed the angle cock at the rear of the tender, the air pump built up brake pressure, the brakes went off, and the locomotive started away, the grade being descending at about 30 ft. to the mile. The engineman telephoned to a station ahead, the station set a signal at stop and the runaway locomotive, when it reached the distant signal, was stopped, in a distance of 700 ft. having traveled about three miles at 20 miles an hour.

The report summarizes the train accident investigations which have been made during the year. In connection with rail failures it is stated that the Sperry device for detecting transverse fissures has been used on 18,000 miles of track; and it has detected some defects other than transverse fissures. Ten of these Sperry inspecting cars are now in service, or will soon be ready.

Train accident investigations are briefly summarized. During the year 15 cases of collision or derailment have been made the subject of supplementary investigations to see whether the roads were carrying out the advice given by the government. In practically all cases it was found that the roads had "given careful consideration" and in many cases had made changes in practice.

The bureau has investigated 31 safety devices brought before it during the year and has commended as practical a switch lock, an automatic crossing signal, a crossing gate, and a type of car construction.

BANANAS ARE CARRIED ON GERMAN RAILWAYS from the port of Bremerhaven in ordinary box cars, lined with straw and paper in cold weather to prevent freezing. Trains of 5 and 6 cars are dispatched through to the key stations as express goods and from these stations the cars for the more remote cities are hooked on to the slower passenger trains.

TANGANYIKA RAILWAY TRAFFIC AND EARNINGS increased more than 20 per cent during 1929, according to reports received by the Department of Commerce. Gross receipts were £704,463 ($3,423,690) as compared with £581,358 ($2,825,400) in the preceding year. Receipts from other sources were £99,331 as compared with £51,094 in 1928, and gross profit was £80,783 as compared with the preceding year's profit of £48,198. Passengers carried were 535,404 as compared with 478,625 in 1928, the increase being mainly in the carriage of third class passengers, indicating increasing use of the railways by the natives.

Asks Relief From Reparation Burden

WASHINGTON, D. C.

THE Interstate Commerce Commission is strongly of the opinion that its time can be more profitably employed on other problems than those presented by the importunities of the "reparation hounds" who seek repayment of the difference between a freight rate reduced by the commission and the rate previously in effect—the old rate generally being one which had been pronounced reasonable by the commission at the time it was established.

In its thirty-third annual report (1919) the commission discussed its powers and duties under the act in respect of reparation awards and recommended that the law be so amended as affirmatively to recognize that private damages do not necessarily follow a violation of the act; and to provide that sections 8, 9, and 16 of the act shall be construed to mean that no person is entitled to reparation except to the extent that he shows by proper evidence that he has suffered damage. These recommendations were repeated in the thirty-fourth annual report (1920), but Congress has not legislated upon the subject.

Since the effective date of the transportation act, 1920, the commission has issued reports in 9,231 rate cases. Reparation was sought in 6,367 cases, or 69 per cent of all cases in which matters affecting the rate structure were considered. The amounts of reparation sought and awarded have increased year by year during that period. In a large proportion of the cases the amounts involved are small, and no question of particular public interest is involved. The awards have amounted to approximately $4,000,000 per year, including the waiver of the collection of outstanding undercharges. During the year ended October 31, 1930, it issued orders upon 10,656 special docket applications in amounts totaling $1,804,780.56. These orders also waived collection of outstanding undercharges amounting to $592,094.85.

"The increased number and complexity of these so-called reparation cases have so encroached upon our time and energies as to deprive us of adequate time for the thorough consideration of the many larger and more important problems continually coming before us," the commission said in its annual report, calling attention to its previous reports in which it had described the activities of the numerous agencies whose principal or sole business is to obtain from shippers their paid freight bills and power of attorney to bring complaints in their names.

"The practices to which we there referred have not diminished but have greatly increased. These and many other questionable practices are often resorted to.

"Another growing class of complaints is found in those involving the applicability of the rates filed pursuant to section 6 of the act, wherein a refund of alleged overcharges is sought. These cases are extremely technical in character, and although many prove to be without substantial merit all require consideration.

"The burden of reparation cases has become heavy and some measure of relief is required in the public interest.

"When the interstate commerce act was passed, we were given no power to prescribe rates for the future as we now have under the amendments of 1906, and it was therefore entirely reasonable that parties who could not secure in advance reasonable rates for prospective

shipments should have a considerable length of time after their shipments moved and the unreasonable charges had been paid within which to file complaints for reparation.

"At present the cause of action accrues upon delivery or tender of delivery of the property by the carrier and, with certain exceptions, complaints must be filed within two years thereafter, except for overcharges, for which the period is three years. But now that we have been granted quasi-legislative power to prescribe just and reasonable rates for the future, and the rate structure of the country is so largely that which has come out of many formal proceedings before us, over a long period of years, we are of the opinion that these statutory periods should be substantially reduced. We therefore recommend that the act be amended so as to (1) restrict our power to award reparation under the first four sections thereof to the period commencing 90 days prior to the date on which the complaint is filed, and (2) to the period of six months prior to the filing of the complaint in the case of overcharges under section 6; recommendations (1) and (2) to be subject to the existing exceptions stated in paragraphs (3) (c) and (3) (d) of section 16 of the act, modified to conform with these recommendations. Actions by carriers for the collection of undercharges should also be limited to a period of six months from the time the cause of action accrues."

Railroads Rank High As Newspaper Advertisers

FORTY-SIX railroads in the United States spent more than $8,000,000 during 1929 for advertising placed in newspapers and magazines in this country. This aggregate expenditure included $1,009,884 for magazine advertising and $7,000,000 for newspaper and rotogravure space, according to records compiled from a number of sources by Sales Management.

In the use of newspapers in 1929 the railroads as a group ranked sixth among the 61 classifications of advertisers, the divisions having a greater lineage being the advertisers of passenger automobiles, of medicines, of radio sets, of cigarettes and of automotive gasolines and oils. The tabulation of newspaper advertising covers the actual lineage used by 2,548 products in 369 daily and Sunday newspapers in 79 of the largest cities in the United States.

This compilation shows that railroad lineage in newspapers totaled 23,257,509. Of the other forms of transportation, steamship lines used a lineage of 10,413,736 in newspapers; air lines, 357,561, and motor coach lines, 878,347. The largest single group of newspaper advertisers—cigarette manufacturers—had a lineage of 37,261,390. The expenditure for newspaper advertising by railroads—$6,977,251—was obtained by multiplying the lineage by an average rate per line of 30 cents.

Railroads also spent more for magazine advertising than any other form of transportation in 1929. The total of $1,331,904 compares with $874,942 for the steamship lines, $77,250 for the motor coach lines and $12,848 for the air lines. The Canadian National and the Canadian Pacific, of Canada, and foreign railroads, including the Great Western; the Southern; the London, Midland & Scottish and the London & North Eastern of England, the French Railways, the South African Government Railways, the Indian State Railways, the Swedish State Railways and the Swiss Federal Railways spent $158,274 for advertisements in United States magazines. The railroad expenditure was not as impressive among others of the 23 groups of magazine advertisers. As an example, the manufacturers of drugs and toilet goods expended more than $33,000,000, and the automotive industry more than $26,000,000 for this type of advertising.

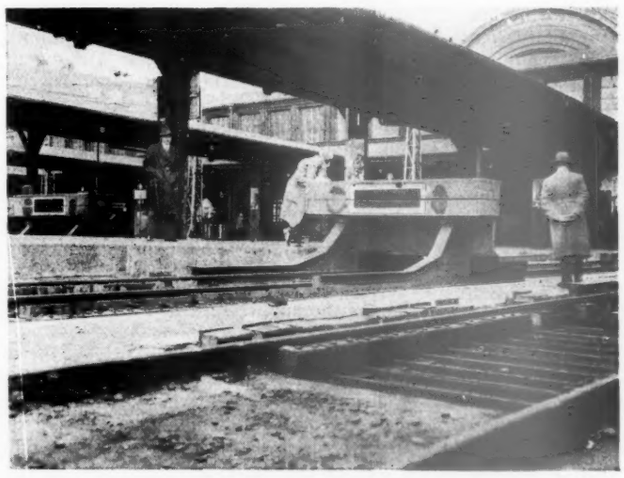
A table showing the amount of newspaper and magazine advertising used by United States railroads in this country follows:

	Newspaper Lineage	Magazine Dollars
Atchison, Topeka & Santa Fe	1,690,484	$108,982
Atlantic Coast Line	162,011	.....
Baltimore & Ohio	1,066,245	1,430
Bangor & Aroostook	546	.....
Boston & Albany	121,734	.....
Boston & Maine	47,647	.....
Buffalo, Rochester & Pittsburgh	4,346	.....
Central of New Jersey	173,251	.....
Chesapeake & Ohio	137,219	.....
Chicago & Alton	120,566	.....
Chicago, Burlington & Quincy	820,957	76,392
Chicago & Eastern Illinois	67,957	.....
Chicago Great Western	284,915	1,520
Chicago, Milwaukee, St. Paul & Pacific	1,027,289	170,372
Chicago & North Western	860,522	.....
Chicago, Rock Island & Pacific	810,124	41,549
Cleveland, Cincinnati, Chicago & St. Louis	319,528	.....
Delaware & Hudson	8,977	.....
Delaware, Lackawanna & Western	166,916	.....
Denver & Rio Grande Western	92,860	.....
Erie	205,352	14,400
Florida East Coast	.....	5,606
Great Northern	826,476	36,309
Illinois Central	744,367	.....
Lehigh Valley	243,995	.....
Louisville & Nashville	1,034,756	55,388
Minneapolis, St. Paul & Sault Ste. Marie	175,848	717
Missouri-Kansas-Texas	411,634	.....
Missouri Pacific	1,019,294	2,640
Nashville, Chattanooga & St. Louis	27,356	.....
New York Central	1,169,216	117,780
New York, Chicago & St. Louis	148,767	.....
New York, New Haven & Hartford	353,861	.....
Norfolk & Western	108,324	.....
Northern Pacific	599,931	111,497
Pennsylvania	2,431,552	54,880
Pere Marquette	19,061	.....
Reading	215,899	.....
St. Louis-San Francisco	310,047	.....
Seaboard Air Line	256,923	1,000
Southern Pacific	1,454,104	17,720
Southern	502,858	.....
Texas & Pacific	336,506	.....
Union Pacific	1,164,035	191,702
Wabash	27,020	.....
Western Pacific	181,030	.....

Advertising used by the two Canadian railways in the United States in 1929 was as follows:

	Newspaper Lineage	Magazine Dollars
Canadian National	516,831	$174,257
Canadian Pacific	286,653	150,577

* * *



Sliding Bumpers at Munich on the German State Railways

It is claimed that this bumper can be hit with safety at 22 m. p. h. The bumping block rests on top of about 10 ties laid close together and the rail runs between the bottom of the block and the top of the ties. This bumper was patented by A. Rawie, Osnabruck, Germany, plan DRPN 225,490.

Communications and Books

Use Buses for Local Service—Reduce Long Haul Coach Fares

MARION, ILL.

TO THE EDITOR:

I have read with much interest the alarming articles in your publications regarding the deplorable situation which confronts the railroads with respect to the falling off of passenger traffic due to highway competition. I have spent my whole life as a railroad employee and officer, up until the last five years when I have been engaged in highway transportation, and for this reason, feel that I can give you some information that, from the tone of your articles, might be, at least, interesting.

The railroads themselves hold the key to the situation, and not the lawmakers or the regulatory bodies.

It will be noted, from the data recently published by the Railroads' Committee on Public Relations in New York, that in the revenue received from carrying passengers in sleeping cars and parlor cars, there was an increase of 24 per cent in 1929 over 1921, while in the revenue received from carrying passengers in day coaches, there was a decrease of 46 per cent in 1929 compared with 1921.

These figures match exactly with what has been the observation of everyone that is familiar with what has been happening since 1921; that is, after the completion of the hard roads, the majority of travelers were ordered to either use the automobile, or the bus. They could not afford to pay the day coach rate of 3.6 cents per mile, and a large volume of travelers—the ones that could not afford Pullman service—used either the automobile, or the bus. This was especially true on local and short-haul travel, where the railroads are still attempting to give a local and feeder service with a steam train, that is not even competitive with the automobile, or bus, for this class of service, with the result that approximately fifteen million dollars a year are being wasted. Therefore, if the railroads would immediately eliminate their unprofitable local steam trains and give this local and feeder service with buses, it could all be handled at a profit and at the same time co-ordinated with the good trains in such a manner that their revenue would be very materially increased.

Regarding the long haul travel, the day coach rate for long haul travel should be reduced to 2 cents per passenger mile, at the most, and if this were done, the railroads would very quickly retrieve practically all of the long haul business that has been lost to the bus and private automobile, and at no cost to them for the reason that the good fast trains that are already running, could handle two, three or even ten day coaches, without any additional operating cost but with a marked increase in revenue per train mile.

For example, a day coach seats 80 passengers. At 2 cents per mile this would be $1.60 per car mile, and four additional cars would be $6.40 additional per train mile, without increasing the operating cost of the train. The present cost for operating a steam train is $1.25 per mile. This $6.40, plus the revenue of $2.50 already accruing on the higher class Pullman trains, would equal $8.90 per train mile, or $7.66 per train mile, net.

No legislation can change the laws of economics, nor should anyone attempt to do so, as the public will travel the way it can travel the cheapest.

It costs 30 cents per bus mile in long haul travel, for 30 passengers, or 1 cent per mile, and no one will deny the fact that passengers can be handled in day coaches on fast trains, already being operated between large, distant points, where the volume is sufficient, at a much lower cost per passenger than can be handled on a bus, or automobile.

In other words, the whole trouble now is that the railroads are using steam trains where a bus or automobile actually belongs, in local and feeder service, and are not permitting the passengers to ride at bus rates in day coaches on the long haul fast trains, where they can be handled much cheaper than by either automobile, or bus. These are facts that cannot be denied, and for the railroads to continue to hold the day coach rate up to 3.6 cents per mile, is the best thing that could be done to assist the continuation of their losses.

In other words, if this policy were immediately installed, there would be, within the next ninety days, a marked increase in passenger revenue, and a very marked decrease in the operating costs by elimination of the local and feeder steam trains, which the public is not using and never will use as long as the automobile and hard roads are available, nor do any of the regulatory bodies wish the railroads to continue such unprofitable service; but they do insist that some kind of public service be rendered, preferably bus service.

H. F. BARBER,
President, Egyptian Transportation Company.

A Dispatcher Favors Vigorous Action—Employees Eager to Aid

ROCHESTER, N. Y.

TO THE EDITOR:

The railroads today are in a tough spot, and part of the blame can be laid at their own feet. Their aggressiveness and initiative have been directed toward the wrong goal.

They have been interested chiefly during the past year in reducing expenses in different ways, and have lost sight of the fact that their decreasing revenues could and should have been attended to by a plan of co-operation with those they have been throwing out of employment and putting on part time.

If they would expend the same amount of energy and time in getting together amongst themselves and form some means of combatting the common enemy (trucks, pipe lines, etc.) as they expend in laying off men—closing shops and offices, allowing their motive power and other facilities to deteriorate—it would seem to be a more sensible plan.

There is no reason why the railroads could not secure the co-operation of the Brotherhoods and form a plan of procedure to combat other forms of transportation, as well as higher taxes. The purchasing power of the thousands of employees' families and also their votes ought to be an aid.

Committees could be formed and organized by officers on each division, and each division could form standing committees and initiate a campaign of advertising in the newspapers throughout the country, and put before the people facts pertaining to the necessity of regulating other forms of transportation on the same basis as the railroads are now regulated. Divide the cities of over fifty thousand population into zones and arrange systematically to ascertain what these trucks are hauling—where it goes and where from and encourage the families that depend on the railroads for their living to trade with those firms who are not cutting off our means of livelihood by favoring trucks where the railroads can best perform the task of transportation.

It would seem that united we could do quite a lot in this manner—but the railroad executives do not seem to be in a position where they can get together. Fearing some one in their midst will get an advantage, they do not seem able to trust themselves.

The time is right here now for railway executives from top to bottom to start taking the rank and file of their employees into their confidence, get down off their high horses and get down to business. You can not expect the brotherhoods to stand the loss of three hundred thousand members out of work, and several thousand more only making three or four days a week, to feel elated over battling for the rights of the companies. But in the end loyalty will triumph, and if the rank and file of the workers are treated with a little consideration and common sense is used, we can accomplish anything we are asked to do. And we stand ready to go the limit if only the officers will keep up their end in anything undertaken for the good of the country and the welfare of those that run the railroads.

JOS. R. BREWER,
Train Dispatcher, B., R. & P.

Books and Articles of Special Interest to Railroaders

(Compiled by Elizabeth Cullen, Reference Librarian, Bureau of Railway Economics, Washington, D. C.)

Books and Pamphlets

Annual Report of the Chief of Engineers, U. S. Army, 1930. Reports in detail on river and harbor work including flood control, under charge of the Corps of Engineers. General plan of report discusses location and description of project, original condition, previous reports, existing project, recommended modifications, local co-operation, terminal facilities, effect of improvement, operations and result, condition at end of fiscal year, etc. Second volume contains commercial statistics of water-borne commerce of the United States for the calendar year 1929. 2 vols. Pub. by U. S. Govt. Print. Off., Washington, D. C. $3 for report vol., $1.25 for commercial statistics volume.

Bulletin No. 329, American Railway Engineering Association. The reports of the Committee on Grade Crossings (discussing comparative merits of grade crossing protection, provision which should be included in uniform statutes governing highway grade crossing and elimination, etc.), the Special Committee on Clearances submitting clearance diagrams for bridges and tunnels, buildings and sheds, warehouse and enginehouse doors, and platforms, the Committee on Ballast (including answer to question "What is ballasted track?"), the Report of the Committee on Uniform General Contract Forms, and the Special Committee on Standardization, and "The Electrification of the Cleveland Union Terminal" by H. A. Currie, are of interest to many besides engineers. 76 p. Pub. by the Association, Chicago, Ill.

Bulletin No. 23, The Railway and Locomotive Historical Society. Includes "Locomotive performance of nearly one hundred years ago" by Charles E. Fisher, "The Canterbury and Whitstable railway," by Rev. R. B. Fellows, "A Veteran locomotive still on the job," by D. L. Joslyn [Central Pacific's No. 68 named "Peoquop"], "The Carillon and Grenville railway" by Robert R. Brown, "The Nova Scotia railway 1854-1872" by Robert B. Brown, "Outline of the History of the Grand Trunk Railway of Canada" by Wm. H. Breithaupt, the last containing much information on the Victoria and International Bridges. 74 p. Pub. by the Society, Boston, Mass. $1 to members, $2 to non-members.

Exhibit of Books Printed During the XVth Century and Known as Incunabula—List of Books. This exhibit is selected from the Vollbehr Collection purchased by Act of Congress 1930, the most valuable volume being the Gutenberg 42-line Bible, the first book printed in Europe from movable type, about 1454. It is conservatively valued at a million dollars. Case E "Americana" will be of lively interest to transportation people. It contains a copy of Columbus's Second Letter to King Ferdinand of Spain about the discovery of America, written in 1494, illustrated with a picture showing his landing and commenting upon the people he found as follows: "The people are of a very timid disposition and uncommonly simple, honest people, liberal in bestowing what they possess." The geographies and route-books to the Holy Land will interest persons investigating the history of travel and traffic, while from the aspect of materials that have lasted without apparent depreciation in nearly 500 years, the exhibit is of importance. The list gives location in the Library of Congress. 78 p. Pub. by Library of Congress, Washington, D. C. *Apply.*

Periodical Articles

The Competition of Motor and Rail Carriers in Great Britain, by G. Shorey Peterson. "Rail transportation has suffered in both countries from the competition of motor carriers, but the situations differ notably....." American Economic Review, December, 1930, p. 640-657.

Solution Suggested for the Problems of the Railroads, by Mark W. Potter. Manufacturerers' Record, December 11, 1930, p. 28-30.

The Supreme Court Interprets the Railway Labor Act, by Edward Berman. Discussion of decision in Texas and New Orleans Railroad Co. et al. v. Brotherhood of Railway and Steamship Clerks, May 26, 1930. American Economic Review, December, 1930, p. 619-639.

Looking Backward

One Hundred Years Ago

The Albany & Worcester, the first common carrier project in New England, was incorporated in December, 1830. This road is now part of the Boston & Albany.

The "Best Friend," the first locomotive built in the United States for service, successfully attained a speed of 35 m.p.h. on December 14, 1830, on the South Carolina [now part of the Southern] while running light.

Fifty Years Ago

The St. Louis, Iron Mountain & Southern, comprising about 685 miles of line, has passed into the control of Jay Gould, representing the Missouri Pacific. No change in the present management of the road will be made until the next meeting of the board of directors in March, 1881.—*Railway Age,* December 23, 1880.

The opposition members of the Dominion parliament have issued a manifesto to the people of Canada protesting against the ratification of the government's proposed policy with respect to the Canadian Pacific. It states that the ministers have withheld vital information, and have denied the right of the people to be consulted on the scheme. It says that the present subsidies are disproportionate to the work performed and restrictions are imposed detrimental to the country and to the future settlers' claims. It urges parliament not to sanction a measure entailing $40,000,000 increase in the public debt, thus furnishing a pretext for excessive taxation. Nevertheless negotiations with the syndicate have progressed so far that it does not seem likely that parliament will refuse to ratify the bargain.—*Railway Age,* December 23, 1880.

Twenty-Five Years Ago

At a meeting of the directors of the West Jersey & Sea Shore [now part of the Pennsylvania] at Philadelphia on December 13 plans were approved for the electrification of the lines between Camden, N. J., and Atlantic City, 63 miles, for express train service, and about 19 miles of branch lines for local service. The double tracking of the line for the entire distance to Atlantic City will be completed and it is planned to operate trains between Camden and Atlantic City on an 80-minute schedule.—*Railway Age,* December 22, 1905.

The latest information regarding rate legislation is that at a conference held on December 18 at the White House between President Roosevelt, Secretary Taft, Senator Dolliver of Iowa and several other interested persons, the provisions of a railway bill were thoroughly considered which will be presented by Dolliver in the Senate and Hepburn in the House, and will receive the endorsement of the administration. Generally speaking, the only thing which this bill omits in the way of power in the Interstate Commerce Commission is authority to adjust the relations of rates as between competing localities. Shipping interests are disposed to fight to have this power added.—*Railway Age,* December 22, 1905.

Ten Years Ago

H. G. Morgan, office engineer in the signal department of the Illinois Central at Chicago, has been promoted to signal engineer, succeeding W. M. Vandersluis, who has been appointed secretary of the Illinois Central Electrification Commission—Chicago Terminal.—*Railway Age,* December 17, 1920.

After spending the entire month of November in fighting a landslide just east of the Union station at Pittsburgh, Pa., which threatened to cut its New York-Pittsburgh line in two, the Pennsylvania has restored to operation all of the eight tracks which had been buried under a great mass of earth.—*Railway Age,* December 17, 1920.

Odds and Ends of Railroading

Train-Riding Buzzard

Lula, Ga., on the Southern, claims the only train-riding buzzard in the world. He has been tamed and trained, and one of his tricks is to meet all trains, alight on top of a car, ride a mile or two out of town, then fly back.

Same Truck for 28 Years

William H. Harrison, who recently retired as warehouseman for the Southern Pacific at Auburn, Calif., claims a record in that he used the same hand truck for 28 years. In his 40 years' service, he used only three trucks.

Vice-President Now a Knight

F. H. Hamilton, vice-president, secretary and treasurer of the St. Louis-San Francisco, has just been created a Knight of the Legion of Honor by the French government. Mr. Hamilton graduated from the University of Paris in 1893, and, in all, has lived abroad a total of 15 years.

An Enterprising Railroader

When William L. Kinsell, superintendent motive power and equipment of the Alaska Railroad, makes up his mind to do something, there's simply no stopping him. He decided to be married recently, but he did not let the fact that he was in Anchorage, Alaska, and his bride in Minneapolis, Minn., disturb him. As the minister and the bride stood at a telegraph instrument, Kinsell's responses came clicking over the wires from five thousand miles away, and, presently, the deed was done.

Island and Desert Railroaders Belong to Same Club

In taking a geographic census of Pacific Railway Club members, Secretary William S. Wollner found that 35 live in the desert towns of Nevada and Utah. Elko, Nev., leads, with nine members, while Wendover, Utah, and Winnemucca, Nev., are second, with four each. These desert towns are from 500 to 800 miles from the club headquarters, in San Francisco. The census also disclosed that the club has an active member on the island of Guam, in the middle of the Pacific ocean, some 8,000 miles from the American mainland.

Small Models

The recent show of the Model Engineers of Great Britain rather specialized in tiny exhibits. Among the models constructed to extremely small scales was an 0-6-0 tank locomotive in L.M.S. colors, claimed to be the smallest working steam locomotive in the world. It had an overall length of 4¾ in. and was capable of running continuously for 12 min. It was driven by a small oscillating cylinder connected by gearing to the driving wheels, and would haul a load of 2 lb. 10 oz. Another miniature locomotive was a small Southern Railway 0-4-4 tank engine barely 2 in. in length and weighing just under 1 oz. It was operated by an electric motor concealed in the boiler, running at over 8,000 r.p.m. and giving a locomotive speed of 2 m.p.h. The engine was mounted in a case complete with a short length of track.

Railway is Only Name

The Canadian National has no legal existence, according to D. H. Laird, K. C. And he should know, because he is the company's counsel. This novel and interesting contention was made when Joseph Greenberg, who is suing the Canadian National and the Canadian Northern railway company for damages for alleged loss of freight, applied to set aside an order for security for costs obtained by the Canadian Northern railway. C. E. Finkelstein, counsel for Greenberg, told the court that his client had already put up security for costs, in obedience to an order obtained by the Canadian National railways, and strongly objected to any further order. The master agreed. Replying to Mr. Laird's submission that the Canadian National could not be sued, because it was merely a name, the master decided that the trial judge will have to wrestle with that phase of the question.

The Doyle Brothers

The seven Doyle brothers evidently believe in the Chicago, Rock Island & Pacific, since they are all in that company's employ. Pat is car inspector at Herington, Kan.; Mike is chief clerk to the superintendent at Trenton, Mo.; Jim is a switchman at Herington; Pete is a lineman in the telegraph department at Chicago; Frank is an engineman running out of Topeka, Kan.; Robert is a clerk in the accounting department at the same place; while Joe is a clerk in the accounting office at Fort Worth, Texas. They represent a good nucleus of a railroad organization right in the family. To make it unanimous, Mary, the only sister, is the wife of a Rock Island engineman.

Oldest Railroad Ticket Office?

The Newcastle & Frenchtown railroad claims distinction as the builder of the first railroad ticket office in the country, and this ticket office is still standing. It is shown in the illustration in its present guise as a crossing watchman's box. It is at the street just south of the present Pennsylvania passenger station at New Castle, Delaware. It was built in January, 1832. The notice over the door gives its history in brief. The railroad ceased operation prior to the Civil War and a part of it is now a section of the Delmarvo division of the Pennsylvania. The Newcastle & Frenchtown was built to furnish a needed link in water transportation between Philadelphia, Pa., and Baltimore, Md. Passengers traveled by steamboat down the Delaware river from Philadelphia to New Castle, Del., six miles south of Wilmington, thence by the railroad westward about 30 miles across Delaware to Frenchtown, Md., and thence by boat down the Susquehanna to Baltimore. The present canal across this peninsula is a few miles south of the line of the former railroad.

The Former N. & F. Ticket Office

NEWS

October Freight Traffic 17.9 Per Cent Under 1929

Ten-months volume was 13.6 per cent less than business of last year

The volume of freight traffic handled by the Class I railroads in October amounted to 39,291,972,000 net ton-miles, according to reports compiled by the Bureau of Railway Economics. Compared with October, 1929, this was a reduction of 17.9 per cent, and it was a reduction of 18.5 per cent under October, 1928. In the Eastern district the reduction this year was 18.6 per cent; in the Southern district 18.3 per cent, and in the Western 16.8 per cent.

The record for the first ten months of 1930 was 360,783,628,000 net ton-miles, a reduction of 13.6 per cent under that of the corresponding period in 1929, and a reduction of 9.2 per cent under that of 1928. The Eastern district for the ten months reported a reduction of 13.9 per cent compared with the same period in 1929, the Southern district 14 per cent, and the Western 13 per cent.

The average speed of freight trains in October was the highest for any October on record, amounting to 13.7 miles an hour, an increase of 0.7 mile above that for the same period last year.

The average daily movement per freight car in October was 31.5 miles, compared with 36.3 miles for the same month last year and 36.2 miles in October, 1928.

The average load per car in October was 26.4 tons, a decrease of ½ ton below the average for October, 1929, and a decrease of 0.6 ton below that for October, 1928.

New Jersey Stations Closed and Changed

The Public Utility Commissioners of New Jersey have approved the application of the Central of New Jersey for authority to put three small stations under the supervision of a single agent; Barnegat, Forked River and Waretown. The hours of the agent will be apportioned to the different stations in accordance with the times of trains. Local freight trains are run on only three days a week. The three stations are located within a space of 6½ miles.

The application of the New York, Susquehanna & Western to discontinue the maintenance of agencies at Swartswood and Columbia has also been approved as has the application of the Lehigh Valley to put two stations, Landsdown and Stanton, in charge of a single agent. The agent will be at Landsdown five hours and at Stanton two hours, 20 minutes, each business day. A similar part-time arrangement is approved at two other stations on the same road, Neshanic and Three Bridges.

In another case the commission approved the application of the Pennsylvania to discontinue the agency at Wilburtha; the latter road has also been authorized to discontinue the agency at Howell, provided a representative shall be stationed at that point during the potato shipping season, July 1 to December 30, each year.

The commission denied the petition of the Pennsylvania for leave to discontinue the agencies at Lawrence and Carpenterville.

Northwest Passenger Schedules Again Cut

The Great Northern-Chicago, Burlington & Quincy and the Chicago, Milwaukee, St. Paul & Pacific will, on December 28, reduce the running time of the Empire Builder and the Olympian 30 minutes westbound and 45 minutes eastbound, thereby placing these trains on a 59¼-hr. schedule westbound and a 57¼-hr. schedule eastbound. The time of the Oriental Limited of the Burlington-Great Northern eastbound will also be cut 45 minutes.

Appropriation for Alaska R. R.

An appropriation of $1,000,000 for the support of the government's Alaska Railroad, in addition to its revenues, is provided in the appropriation bill for the Interior Department as passed by the House of Representatives for the fiscal year 1932. The bill contains a provision that no salary, except that of the manager of the road, shall exceed $6,000 a year.

Commissioner Mahaffie Confirmed

The Senate on December 16 confirmed the nomination of Charles D. Mahaffie as a member of the Interstate Commerce Commission for the unexpired portion of former Commissioner Woodlock's term this year and also for a new seven-year term. Action had been postponed at the request of Senator Shipstead, of Minnesota, but a favorable report on the nomination was voted by the committee on interstate commerce on December 15.

Water Rate Regulation Opposed by Ship Owners

Steamship Owners' Association opposes current proposals to control water carriers

Asserting, among other arguments, that the Interstate Commerce Commission "has already demonstrated, in the fixing of its rail rates from certain producing centers to certain consuming territories, that it favors rail over water transportation," the American Steamship Owners' Association in a recent statement, opposes current proposals to extend the commission's jurisdiction to port to port water rates and to permit railway-owned vessels to operate through the Panama Canal, Great Lakes and other waters.

At another point the statement says that the I. C. C. "has not been sympathetic to steamship interests, but, on the contrary, in some respects has shown antagonism," while another passage reads, "It is evident that the railroads have confidence in their ability to obtain favorable regulations from the I. C. C."

The statement follows in full:

The American Steamship Owners' Association is opposed to the proposals of the executive committee and member roads of the Association of Railway Executives, which are designed to extend the jurisdiction of the Interstate Commerce Commission to port to port water rates, and to permit railway-owned vessels to operate through the Panama Canal, Great Lakes and other waters.

The Association is also opposed to H. J. Res. 408 recently introduced into Congress, directing the I. C. C. to make an inquiry into and submit a report to Congress giving its recommendations as to whether and to what extent and in what manner coastwise traffic should be submitted to government regulation, and if it recommends in favor of regulation to submit a draft bill to carry such regulations into effect.

If the plan of the railway officials was carried out, it would mean government control of the coastwise and intercoastal business by the I. C. C. which has heretofore been almost exclusively concerned with the regulation of railway traffic, except with respect to through rail and water shipments. It has not been sympathetic to steamship interests, but, on the contrary, in some respects has shown antagonism.

The proposals of the railroads are not designed to increase water borne transportation facilities for these are already

more than abundantly provided for. The manifest basic purpose is to force, by government order, a parity in rail and coastwise water rates, and especially between Atlantic and Pacific Coast ports through the Panama Canal, so that the railroads can take business from the water carriers. This might be accomplished by an increase in water rates, or a decrease in rail rates.

Whatever the method used, the object sought is a transfer of business from the water to the rail carriers.

It is evident that the railroads have confidence in their ability to obtain such favorable regulations from the I. C. C., otherwise the proposal would not be made to give the railroad regulating body control of the water carriers. Undoubtedly, the railroads feel that the present principles of the I. C. C. would be extended under such control. The I. C. C. has already demonstrated in the fixing of its rail rates from certain producing to certain consuming territories that it favors rail over water transportation.

It is also apparent that the railroads are aiming at ultimate ownership of water carriers through the Panama Canal, Great Lakes, and other waters. This would mean that the great transcontinental railroads could drive out of business every independent water carrier, for the latter could never stand up against competition in water rates with competitors owned and operated by the wealthy and powerful railway interests, with their far-reaching organizations and business and political influences.

Water transportation, except in the case of through rail and water routing, has always been a business of open competition. Rates and character of services have been regulated by the forces of competition, and as a result the greatest coastal water transportation facilities in the world have been developed in the United States.

Modern ships give frequent and regular service at regular rates to all shippers. This is the product of competition and the shipping public have received the benefit. Now the railroads propose to change this by control through a government commission whose particular interest has heretofore been the railroads and for which a natural bond of sympathy must have been created.

The change does not promise any benefit to shippers or to shipowners. The railroads alone would profit by it and, naturally, that is the object of the proposals.

Water transportation preceded the railroads. Congress has never found it necessary to prescribe the rates to be charged by the water carriers, except combination railway and water rates. Congress has, however, safe-guarded the shipping public against the discriminatory, and unreasonable rates by vesting regulatory authority in the United States Shipping Board. The Shipping Act, 1916, not only makes it unlawful for any water carrier to give unreasonable preferences for transportation at less than regular rates by means of false billing and other devices, inhibits rebates, and prevents discrimination between ports, but generally vests the Shipping Board with power to determine, prescribe, order and enforce just and reasonable maximum rates and just and reasonable classifications, tariffs, regulations or practices whenever it finds that any rate, fare, charge, classification, tariff, regulation, or practice is unjust and unreasonable.

The American Steamship Owners' Association believes that the extension of the jurisdiction of the I. C. C. over the water carriers in their port to port business would strike a blow at our Merchant Marine, which would result in railroad domination and stultify the development of independent water transportation facilities.

The Association is opposed to the investigation of the business of water-borne carriers by the I. C. C. as proposed by H. J. Res. 408. The members of the Commission are not familiar with shipping and its peculiar problems, for their training and points of view are naturally influenced by their contacts with the railroad business, the betterment of which is one of the primary purposes of the commission.

If any investigation of water transportation were to be made it should be by the Shipping Board, which already has ample authority to make it if it is deemed such an investigation is necessary, or it can be made by an independent commission.

This is not the first attempt of the railroads to break into the business now moving with the water carriers by reason of the lower water rates, for applications for modification of its rulings to make this possible are even now pending before the I. C. C.

The American Steamship Owners' Association intends to oppose the proposals of the railroad officials with all the power at its command. It feels that the shippers should join with them in opposing the proposals if they do not want the railroads to dominate the water transportation of the country.

The Case of the Railroads

What the government can do to relieve the existing business depression, apart from its program of public works, is limited. The government is not, as some members of Congress appear to believe, a charity organization to distribute handouts to all who are in need. Its outlay for public works is not a charitable expenditure. It merely proposes to speed up work which competent officials have already recommended as desirable and which Congress itself has already approved.

Yet there are some things the government may do to aid the revival of business which lie outside the sphere of relief work. It can do much to restore confidence, for example, by adopting a helpful attitude toward the railroads. Our economic welfare is vitally connected with our transportation facilities, and the state into which the railroads have fallen is a matter of public concern. * * *

The country needs all these new agencies—motor vehicles, waterways, pipe lines and power transmission—but the competition which they offer to the railways should be fair. There is reason to believe that in some instances it is not fair; that it is not regulated, as the railroads are regulated and that in the case of motor vehicles and inland waterways it is virtually subsidized from the public treasuries.

The railroads are still the country's main dependence for transportation. They do not require special favors for their support, but they and their competitors should be placed on an equal footing. * * * Congress could do much to improve the status of the railroads and thereby help restore the confidence which is essential to the return of prosperity.—New York World.

Treat Both Railways Fairly—Canada's Policy

An important declaration of policy on the part of the new Conservative Government at Ottawa toward the two principal railway companies of the Dominion was made last week in Montreal by Hon. Robert J. Manion, new Minister of Railways and Canals, who was guest of honor at a dinner in that city. Previous to the dinner and in reply to questions about a recent article appearing in a Montreal evening newspaper, which foreshadowed a conflict between the Canadian Pacific and the Canadian National, Mr. Manion declared there would be no railway war in Canada.

He said, "I think that paper is unnecessarily alarmed, for I have associates with Mr. Beatty and Sir Henry Thornton and I assure you there is no railway war in sight."

Hon. Dr. Manion said in part: "Our Government realizes too well the immense importance of our two great railway systems to countenance any such foolish conflict. Fair treatment will be given by us to the great National system, but I am sure no Canadian citizen would wish unfair treatment meted out to that other great institution, the Canadian Pacific. Our aim will be greater co-operation and less duplication.

"Mr. Beatty has recently said that the Canadian Pacific is not in politics. Sir Henry Thornton has also stated that there is no politics in the Canadian National. In other words, there is no politics in either railway, and neither railway is in politics. That is as it should be. Our Government does not desire to inject politics into our relations with either of the great railway systems, and I am sure that neither of the great railway systems aspires to control the policies of the Government.

"That does not mean that we will accept blindly and without question proposals in-

volving tens of millions of railway expenditure. Before the Government will ask Parliament to provide railway appropriations, the Government will require to be satisfied as to the wisdom and the necessity of proposed expenditures. We believe it to be the Government's duty as trustee for the people of Canada—indeed, as trustee of the Canadian National itself—to avoid unwise or unnecessary increase in already heavy capitalization and interest charges.

"To my mind, the real friends of the National system are not those who loudly cry, Hands off the Canadian National, but those who are anxious to see that railway in a position not only to provide interest charges—to the public, at least—but as soon as possible in a position to take care of all financing needed without either cash subsidies or guarantees from the Government of Canada. In other words, we are most anxious that the Canadian National shall work to improve its own credit position.

"There are enough real difficulties to occupy the attention and engage the energies of us all at this juncture of our country's affairs. Neither I nor the Gov-

(*Continued on page 1344*)

Operating Revenues and Operating Expenses of Class I Steam Railways in the United States

Compiled from the Monthly Reports of Revenues and Expenses for 171 Steam Railways, Including 16 Switching and Terminal Companies.

FOR THE MONTH OF OCTOBER, 1930 AND 1929

Item	United States		Eastern District		Southern District		Western District	
	1930	1929	1930	1929	1930	1929	1930	1929
Average number of miles operated	242,662.61	242,749.97	60,283.28	60,149.29	46,114.26	46,138.79	136,265.07	136,461.89
Revenues:								
Freight	$385,684,085	$483,596,185	$156,364,106	$201,723,692	$66,273,197	$81,582,438	$163,046,782	$200,290,055
Passenger	a52,367,793	b 66,165,044	30,387,770	36,474,000	5,917,345	8,318,828	16,062,678	21,372,216
Mail	9,159,890	c 12,243,075	3,538,783	5,696,234	1,540,596	1,781,138	4,080,511	4,765,703
Express	10,190,559	15,235,671	4,650,067	7,749,987	1,396,423	2,006,619	4,144,069	5,479,065
All other transportation	14,952,598	18,508,603	8,650,941	10,727,240	1,067,008	1,432,215	5,234,649	6,349,148
Incidental	10,174,888	12,614,097	5,362,791	6,287,854	1,153,268	1,456,866	3,658,829	4,869,377
Joint facility—Cr.	1,207,530	1,306,236	395,475	401,796	208,487	224,557	603,568	679,883
Joint facility—Dr.	282,608	310,759	81,409	81,484	30,671	37,366	170,528	191,909
Railway operating revenues	483,454,735	609,358,152	209,268,524	268,979,319	77,525,653	96,765,295	196,660,558	243,613,538
Expenses:								
Maintenance of way and structures	58,028,488	79,428,529	26,215,664	33,974,475	9,694,215	13,655,357	22,118,609	31,798,697
Maintenance of equipment	79,911,599	106,615,310	37,568,358	50,959,636	13,942,921	18,884,902	28,400,320	36,770,772
Traffic	10,057,030	11,047,683	3,925,274	4,308,721	1,880,788	1,987,865	4,250,968	4,751,097
Transportation	159,119,568	187,828,992	73,740,398	88,818,678	24,934,069	28,813,307	60,445,101	70,197,007
Miscellaneous operations	4,226,122	4,934,729	1,963,407	2,318,747	405,816	479,913	1,856,899	2,136,069
General	15,879,273	16,584,738	6,903,258	7,180,296	2,734,482	2,822,109	6,241,533	6,582,333
Transportation for investment—Cr.	936,285	1,496,860	205,849	415,277	91,408	128,442	639,028	953,141
Railway operating expenses	326,285,795	404,943,121	150,110,510	187,145,276	53,500,883	66,515,011	122,674,402	151,282,834
Net revenue from railway operations	157,168,940	204,415,031	59,158,014	81,834,043	24,024,770	30,250,284	73,986,156	92,330,704
Railway tax accruals	32,349,585	39,743,304	13,636,338	16,483,226	5,533,702	7,012,341	13,179,545	16,247,737
Uncollectible ry. revenues	64,565	97,032	26,264	40,059	13,969	15,748	24,332	41,225
Railway operating income	124,754,790	164,574,695	45,495,412	65,310,758	18,477,099	23,222,195	60,782,279	76,041,742
Equipment rents—Dr. balance	9,768,865	9,245,779	4,287,974	3,740,997	d 297,670	d 577,336	5,778,561	6,082,118
Joint facility rent—Dr. balance	2,734,926	2,127,384	1,574,921	1,068,532	267,459	161,329	892,546	897,523
Net railway operating income	112,250,999	153,201,532	39,632,517	60,501,229	18,507,310	23,638,202	54,111,172	69,062,101
Ratio of expenses to revenues (per cent)	67.49	66.45	71.73	69.58	69.01	68.74	62.38	62.10

FOR TEN MONTHS ENDED WITH OCTOBER, 1930 AND 1929

Average number of miles operated	242,738.63	242,658.10	60,300.01	60,165.53	46,132.75	46,137.76	136,305.87	136,354.81
Revenues:								
Freight	$3,493,850,752	$4,106,595,046	$1,483,402,386	$1,773,775,765	$636,078,684	$733,905,733	$1,374,369,682	$1,598,913,548
Passenger	e 625,483,618	f 737,080,281	345,356,434	393,375,126	80,973,253	100,449,873	199,153,931	243,255,282
Mail	91,148,931	g 123,091,442	34,856,597	49,096,515	15,251,718	19,263,577	41,040,616	54,731,350
Express	97,251,484	123,704,689	43,795,049	57,736,380	14,095,140	18,707,886	39,361,295	47,260,423
All other transportation	150,300,354	178,701,671	87,269,473	103,044,993	11,008,920	13,248,679	52,021,961	62,407,999
Incidental	100,170,366	113,886,579	51,749,811	56,968,918	13,050,068	14,113,990	35,370,487	42,803,671
Joint facility—Cr.	11,145,523	11,314,450	3,767,116	3,713,895	1,977,923	1,829,484	5,400,484	5,771,071
Joint facility—Dr.	3,113,229	3,240,043	932,858	814,209	338,894	355,308	1,841,477	2,070,526
Railway operating revenues	4,566,237,799	5,391,134,115	2,049,264,008	2,436,897,383	772,096,812	901,163,914	1,744,876,979	2,053,072,818
Expenses:								
Maintenance of way and structures	620,035,451	736,344,717	262,059,566	306,488,534	107,852,746	129,017,096	250,123,139	300,839,087
Maintenance of equipment	870,502,769	1,014,420,335	403,711,004	480,406,224	155,697,642	180,066,207	311,094,123	353,947,904
Traffic	108,167,829	108,568,756	41,440,196	41,292,604	19,990,176	19,853,316	46,737,457	47,422,836
Transportation	1,584,149,028	1,764,496,098	744,700,553	832,040,951	253,171,546	279,462,942	586,276,929	652,992,205
Miscellaneous operations	44,829,463	49,551,479	21,000,930	22,704,387	5,213,446	5,430,562	18,615,087	21,416,530
General	162,013,522	162,447,512	70,925,957	70,399,016	27,453,449	27,789,933	63,634,116	64,258,563
Transportation for investment—Cr.	10,823,683	11,422,266	2,162,951	2,780,308	953,627	934,806	7,707,105	7,707,152
Railway operating expenses	3,378,874,379	3,824,406,631	1,541,675,255	1,750,551,408	568,425,378	640,685,250	1,268,773,746	1,433,169,973
Net revenue from railway operations	1,187,363,420	1,566,727,484	507,588,753	686,345,975	203,671,434	260,478,664	476,103,233	619,902,845
Railway tax accruals	308,490,898	348,701,019	128,251,802	146,061,525	56,983,455	63,550,844	123,255,641	139,088,650
Uncollectible ry. revenues	795,847	957,048	315,316	387,077	139,097	219,149	341,434	350,822
Railway operating income	878,076,675	1,217,069,417	379,021,635	539,897,373	146,548,882	196,708,671	352,506,158	480,463,373
Equipment rents—Dr. balance	82,608,825	79,901,080	41,087,332	40,213,859	477,865	d 2,134,548	41,043,628	41,821,769
Joint facility rent—Dr. balance	23,026,923	21,101,647	12,134,715	10,694,160	2,323,926	1,943,803	8,568,282	8,463,684
Net railway operating income	772,440,927	1,116,066,690	325,799,588	488,989,354	143,747,091	196,899,416	302,894,248	430,177,920
Ratio of expenses to revenues (per cent)	74.00	70.94	75.23	71.84	73.62	71.10	72.71	69.81

a Includes $2,610,781 sleeping and parlor car surcharge. b Incluues $3,264,096 sleeping and parlor car surcharge. c Includes approximately $2,631,160 back mail pay. d Deficit or other reverse items. e Includes $30,5 78,720 sleeping and parlor car surcharge. f Includes $34,310,279 sleeping and parlor car surcharge. g Includes approximately $30,574,119 back mai l pay.

Compiled by the bureau of statistics, Interstate Commerce Commission. Subject to Revision.

Operating Statistics of Large Steam Railways—Selected Items for October, 1930, Com

Region, road and year	Average miles of road operated	Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (thousands)	Car-miles: Per cent loaded	Ton-miles (thousands): Gross, Excluding locomotives and tenders	Ton-miles (thousands): Net, Revenue and non-revenue	Average number of locomotives on line: Serviceable	Unserviceable	Per cent unserviceable	Stored
New England Region:												
Boston & Albany	1930	407	158,607	168,538	15,978	4,434	63.9	239,206	83,537	87	44	33.6	28
	1929	407	225,371	238,471	22,743	5,670	67.9	300,766	116,318	99	23	18.6	32
Boston & Maine	1930	2,066	378,535	434,158	59,594	13,141	68.1	706,230	270,539	258	41	13.7	71
	1929	2,059	459,724	558,852	68,383	16,054	69.2	848,436	341,434	248	49	16.4	19
N. Y., New H. & Hart.	1930	2,093	432,194	509,372	31,527	15,231	63.1	861,299	336,089	272	76	21.7	47
	1929	2,104	539,673	631,119	45,063	19,509	68.6	1,052,056	442,903	284	50	15.0	17
Great Lakes Region:												
Delaware & Hudson	1930	875	331,135	439,784	46,370	10,860	63.0	683,446	326,320	235	35	13.0	89
	1929	875	376,528	504,732	52,219	12,475	66.3	766,703	378,239	237	34	12.4	67
Del., Lack. & Western	1930	998	485,619	535,009	64,088	16,786	65.8	975,894	402,922	230	54	19.0	29
	1929	998	548,078	605,209	71,904	20,197	70.5	1,127,606	491,087	237	54	18.6	22
Erie (inc. Chi. & Erie)	1930	2,316	888,186	942,752	74,260	40,094	61.9	2,461,762	979,088	405	87	17.7	75
	1929	2,316	1,054,729	1,150,578	91,897	47,662	64.0	2,853,283	1,165,755	413	92	18.2	16
Grand Trunk Western	1930	1,020	239,713	243,694	4,258	6,841	64.4	387,615	142,543	79	32	28.8	41
	1929	992	330,268	332,560	3,422	9,830	66.3	543,756	205,755	108	31	22.5	7
Lehigh Valley	1930	1,343	492,654	532,455	58,778	16,005	64.3	991,239	432,579	251	92	26.8	36
	1929	1,343	583,304	646,899	75,558	19,763	65.4	1,193,959	527,270	280	80	22.3	17
Michigan Central	1930	1,865	451,074	453,328	13,393	14,931	59.6	876,791	314,001	157	58	27.0	39
	1929	1,822	565,517	566,060	19,063	19,809	62.3	1,119,609	410,453	194	38	16.3	29
New York Central	1930	6,468	1,889,727	2,075,693	147,089	73,860	61.3	4,570,070	1,891,684	1,022	329	24.3	368
	1929	6,467	2,286,872	2,525,705	208,418	90,094	62.4	5,477,316	2,356,487	990	290	22.6	174
New York, Chi. & St. L.	1930	1,660	588,335	595,834	8,726	18,906	61.5	1,097,373	395,945	203	55	21.2	43
	1929	1,665	718,486	725,998	7,640	24,048	66.1	1,333,454	516,876	203	50	19.9	9
Pere Marquette	1930	2,201	412,683	420,114	4,157	10,340	60.8	637,280	248,094	171	24	12.3	33
	1929	2,178	542,512	548,404	6,144	13,839	62.9	819,037	348,499	183	20	9.9	...
Pitts. & Lake Erie	1930	231	104,648	107,627	1,127	4,000	60.6	321,463	182,467	60	12	16.3	29
	1929	231	144,695	147,019	1,747	5,236	65.3	403,186	235,086	48	13	21.4	5
Wabash	1930	2,497	754,145	797,714	11,302	22,971	63.3	1,347,256	488,692	315	80	20.3	43
	1929	2,497	885,476	938,121	18,090	27,544	65.6	1,554,740	588,473	287	73	20.2	14
Central Eastern Region:												
Baltimore & Ohio	1930	5,541	1,663,959	1,950,325	245,128	54,674	60.1	3,697,399	1,638,193	951	235	19.8	160
	1929	5,536	2,113,542	2,439,062	310,863	67,468	62.2	4,492,231	2,105,883	1,051	163	13.4	78
Big Four Lines	1930	2,712	717,637	749,010	25,722	23,521	61.0	1,537,450	706,591	292	165	36.1	32
	1929	2,717	894,660	936,309	25,457	28,244	59.6	1,870,977	853,582	329	111	25.2	9
Central of New Jersey	1930	692	240,449	265,467	44,777	7,733	56.5	539,225	251,705	150	37	19.9	18
	1929	691	300,623	326,435	51,843	9,268	59.4	624,669	297,765	165	36	18.0	12
Chicago & Eastern Ill.	1930	946	208,023	207,989	2,945	5,646	65.0	346,266	152,106	92	59	39.0	31
	1929	946	257,462	258,450	3,309	7,352	66.6	439,883	198,587	101	68	40.1	25
Elgin, Joliet & Eastern	1930	453	118,703	124,026	6,004	3,208	60.1	250,110	128,073	75	18	19.6	13
	1929	453	141,114	150,384	7,431	4,084	63.7	302,797	157,692	75	12	13.6	...
Long Island	1930	400	52,816	57,557	13,685	789	54.6	55,739	21,600	41	8	17.1	...
	1929	400	57,375	62,393	18,691	705	56.2	46,323	18,599	44	4	8.8	1
Pennsylvania System	1930	10,675	3,761,145	4,238,746	448,157	139,157	62.6	9,234,676	4,097,883	2,339	308	11.6	728
	1929	10,738	4,559,674	5,231,240	526,015	167,423	63.9	11,123,296	5,174,778	2,467	347	12.3	347
Reading	1930	1,448	609,075	662,963	56,487	16,815	58.6	1,234,848	587,972	318	65	17.0	39
	1929	1,451	665,784	731,694	53,337	19,578	63.4	1,325,976	665,925	333	58	14.9	31
Pocahontas Region:												
Chesapeake & Ohio	1930	3,113	1,213,692	1,289,843	54,282	46,086	54.7	3,924,394	2,110,653	562	119	17.5	107
	1929	3,080	1,352,601	1,437,380	61,355	49,956	56.1	4,085,850	2,221,816	573	109	16.0	48
Norfolk & Western	1930	2,230	783,537	857,602	42,933	29,454	57.3	2,493,943	1,299,526	456	42	8.5	134
	1929	2,230	927,716	1,053,378	61,916	36,612	58.6	3,097,182	1,671,301	455	45	8.9	77
Southern Region:												
Atlantic Coast Line	1930	5,159	630,937	633,593	8,987	14,914	61.3	835,608	306,629	394	60	13.3	111
	1929	5,153	592,925	596,351	9,536	15,182	63.6	826,407	306,903	414	51	11.0	105
Central of Georgia	1930	1,900	242,265	243,624	4,494	6,197	67.9	337,785	133,970	119	29	19.4	9
	1929	1,900	287,484	292,288	5,459	7,704	73.1	401,054	170,921	132	21	13.5	5
Ill. Cent. (inc. Y. & M. V.)	1930	6,695	1,723,170	1,744,037	30,565	46,829	59.4	3,136,118	1,251,803	754	163	17.8	59
	1929	6,695	2,100,861	2,121,543	32,275	60,006	64.5	3,817,969	1,637,387	738	107	12.7	13
Louisville & Nashville	1930	5,251	1,432 120	1,516,528	43,260	31,611	58.6	2,225,682	1,065,271	575	130	18.5	122
	1929	5,247	1,695,305	1,799,984	54,334	37,857	59.4	2,619,413	1,257,200	575	118	17.0	28
Seaboard Air Line	1930	4,479	544,782	559,006	5,887	13,271	62.8	772,544	290,811	277	26	8.6	31
	1929	4,475	533,679	547,628	5,292	13,918	67.4	759,351	302,675	262	48	15.5	23
Southern	1930	6,676	1,363,649	1,389,119	24,071	33,139	64.6	1,859,919	725,259	815	168	17.1	217
	1929	6,679	1,589,284	1,624,064	34,433	41,281	68.0	2,225,032	916,305	821	130	13.6	155
Northwestern Region:												
Chi. & North Western	1930	8,459	1,416,972	1,496,009	26,490	36,037	59.8	2,304,118	883,874	755	111	12.9	116
	1929	8,450	1,676,617	1,777,171	38,466	45,887	62.2	2,722,982	1,078,345	729	94	11.5	35
Chi. Gt. Western	1930	1,459	301,332	324,850	28,404	9,937	61.4	593,686	216,982	94.9	14.5	13.3	3.2
	1929	1,459	322,802	374,320	21,183	10,505	63.6	609,145	231,827	117.3	22.5	16.1	19.5
Chi., Milw., St. P. & Pac.	1930	11,314	1,641,718	1,751,368	93,203	47,659	60.6	2,967,060	1,188,824	804	143	15.1	245
	1929	11,244	1,879,045	2,025,580	109,865	57,810	64.2	3,442,190	1,464,237	794	146	15.5	129
Chi., St. P., Minn. & Om.	1930	1,714	306,911	333,538	15,525	6,759	61.7	400,604	159,023	149	28	15.7	36
	1929	1,724	326,184	353,440	14,946	7,190	67.7	410,682	168,559	143	27	15.9	31
Great Northern	1930	8,338	1,075,249	1,094,146	45,478	41,508	61.1	2,706,017	1,131,351	495	142	22.2	67
	1929	8,340	1,149,777	1,192,109	82,506	45,650	63.1	2,910,036	1,320,588	504	103	16.9	29
Minn., St. P. & S. St. M.	1930	4,351	441,493	454,645	5,927	12,755	66.3	719,817	317,603	167	53	24.0	19
	1929	4,357	528,126	545,753	9,765	16,019	68.4	880,777	395,104	189	39	17.0	14
Northern Pacific	1930	6,469	799,863	854,174	57,939	26,739	66.9	1,558,587	649,906	402	111	21.6	30
	1929	6,468	940,394	999,742	57,706	32,431	68.9	1,835,772	799,683	437	106	19.5	35
Oreg.-Wash. R. R. & Nav.	1930	2,218	214,495	227,244	15,823	6,149	66.9	372,716	157,953	124	22	15.1	32
	1929	2,246	228,129	242,943	19,623	7,123	70.8	410,258	182,646	137	6	4.0	28
Central Western Region:												
Atch., Top. & S. Fe (incl. P. & S. F.)	1930	11,263	2,133,268	2,373,234	156,618	73,601	62.6	4,534,127	1,453,665	804	165	17.0	152
	1929	11,232	2,438,150	2,689,489	163,838	84,642	63.4	5,139,185	1,738,779	824	140	14.5	66
Chicago & Alton	1930	1,000	297,090	321,665	2,282	7,221	61.0	457,132	172,157	119	28	19.0	18
	1929	1,000	316,197	341,832	2,533	8,057	64.5	467,426	187,684	126	20	13.6	12
Chi., Burl. & Quincy	1930	9,275	1,453,743	1,512,972	61,971	46,423	59.2	2,830,873	1,234,029	629	141	18.3	25
	1929	9,316	1,699,263	1,790,518	80,857	55,427	61.8	3,307,400	1,480,457	680	157	18.8	13
Chi., Rock I. & Pacific	1930	7,593	1,232,065	1,276,432	10,039	32,630	62.3	1,963,512	778,774	528	147	21.7	128
	1929	7,592	1,588,310	1,654,001	14,539	40,782	63.6	2,435,099	1,002,083	550	119	17.8	52
Denver & R. G. Wn.	1930	2,524	452,643	507,555	60,773	12,038	61.8	726,587	264,728	240	8	3.0	23
	1929	2,564	459,911	542,327	83,191	12,614	65.5	720,341	288,424	230	42	15.3	10
Oregon Short Line	1930	2,539	410,993	433,764	34,397	12,652	62.2	801,123	309,395	172	7	4.1	30
	1929	2,539	476,454	511,304	53,393	14,250	64.6	876,066	348,673	188	6	3.2	19
So. Pacific—Pacific Lines	1930	8,981	1,652,636	1,799,143	269,425	55,983	63.2	3,442,234	1,157,821	766	198	20.5	160
	1929	8,966	1,965,327	2,163,682	316,064	64,005	66.0	3,861,224	1,411,533	804	145	15.3	70
Union Pacific	1930	3,765	1,727,861	1,766,639	77,752	62,270	63.5	3,687,217	1,184,970	445	28	5.9	57
	1929	3,765	1,895,561	1,954,595	93,888	65,180	64.7	3,843,169	1,291,064	467	21	4.3	37
Southwestern Region:												
Gulf, Colo. & S. Fe	1930	1,965	223,895	234,714	4,912	7,838	61.8	482,449	190,585	102	20	16.6	19
	1929	1,933	288,732	303,764	7,582	10,508	64.3	640,429	271,660	112	18	13.5	11
Mo.-Kans.-Texas Lines	1930	3,176	384,072	391,153	7,246	12,713	59.7	758,563	293,170	158	77	32.8	55
	1929	3,176	459,631	468,567	10,340	16,677	61.0	970,171	378,063	194	46	19.1	71
Missouri Pacific	1930	7,423	1,475,952	1,550,728	45,187	42,850	61.5	2,695,767	1,078,098	548	85	13.3	148
	1929	7,417	1,663,178	1,738,355	51,266	49,957	65.6	2,966,434	1,252,768	577	75	11.5	113
St. Louis-San Francisco	1930	5,169	739,217	748,175	10,474	18,859	60.0	1,156,951	449,696	368	81	18.1	48
	1929	5,213	983,787	998,438	12,049	24,372	63.4	1,441,000	594,848	419	58	12.2	15
Texas & New Orleans	1930	4,701	614,955	617,026	2,240	15,319	62.2	929,359	356,536	262	76	22.4	58
	1929	4,709	819,272	823,825	3,159	20,034	64.9	1,176,620	461,256	281	49	14.8	42
Texas & Pacific	1930	1,951	359,950	359,950	2,715	10,347	59.6	646,462	242,031	203	43	17.4	43
	1929	1,950	445,379	445,379	8,381	12,458	61.6	771,089	300,463	194	19	9.1	29

Compiled by Bureau of Statistics Interstate Commerce Commission. Subject to Revision

pared with October, 1929, for Roads with Annual Operating Revenue Above $25,000,000

Region, road and year	Average number of freight cars on line: Home	Foreign	Total	Per cent unserviceable	Gross ton-miles per train-hour, excluding locomotives and tenders	Gross ton-miles per train-mile, excluding locomotives and tenders	Net ton-miles per train-mile	Net ton-miles per loaded car-mile	Net ton-miles per car-day	Car-miles per car-day	Net ton-miles per mile of road per day	Pounds of coal per 1,000 gross ton-miles, including locomotives and tenders	Locomotive-miles per locomotive-day
New England Region:													
Boston & Albany.....1930	3,107	3,836	6,943	7.1	20,167	1,508	527	18.8	388	32.2	6,619	157	45.4
1929	2,796	5,223	8,019	7.6	18,641	1,335	516	20.5	468	33.6	9,217	168	69.5
Boston & Maine.....1930	10,914	9,670	20,584	7.6	22,803	1,866	715	20.6	424	30.2	4,224	106	53.3
1929	7,563	15,552	23,115	2.5	22,280	1,846	743	21.3	476	32.4	5,349	106	68.3
N. Y., New H. & Hart..1930	18,055	16,027	34,082	12.6	24,372	1,993	778	22.1	318	22.8	5,179	107	50.2
1929	13,811	21,709	35,520	8.1	23,438	1,949	821	22.7	402	25.8	6,790	107	65.4
Great Lakes Region:													
Delaware & Hudson.....1930	8,992	5,542	14,534	4.1	26,033	2,064	985	30.0	724	38.3	12,027	118	58.1
1929	7,536	6,652	14,188	3.9	25,204	2,036	1,005	30.3	860	42.8	13,944	124	66.4
Del., Lack. & Western...1930	16,923	6,651	23,574	5.9	25,684	2,010	830	24.0	551	34.9	13,022	135	67.9
1929	14,027	11,324	25,351	4.1	25,272	2,057	896	24.3	625	36.5	15,871	135	75.1
Erie (inc. Chi. & Erie)..1930	36,879	16,388	53,267	3.9	38,487	2,772	1,102	24.4	593	39.2	13,637	104	66.7
1929	27,690	26,812	54,502	4.9	34,840	2,705	1,105	24.5	690	44.1	16,236	109	79.4
Grand Trunk Western...1930	4,349	10,234	14,583	8.4	23,815	1,617	595	20.8	315	23.5	4,510	101	72.5
1929	3,439	13,798	17,237	5.6	22,792	1,646	623	20.9	385	27.7	6,692	105	77.5
Lehigh Valley 1930	20,106	8,425	28,531	7.2	27,480	2,012	878	27.0	489	28.1	10,391	142	55.6
1929	18,306	12,318	30,624	5.8	27,523	2,047	904	26.7	555	31.8	12,660	147	64.7
Michigan Central.....1930	24,055	14,254	38,309	5.5	32,741	1,944	696	21.0	264	21.1	5,430	109	70.0
1929	15,595	16,795	32,390	5.1	31,670	1,980	726	20.7	409	31.7	7,267	109	81.6
New York Central.....1930	76,858	65,974	142,832	6.8	32,200	2,418	1,001	25.6	427	27.2	9,435	99	53.1
1929	57,875	82,796	140,671	4.5	30,995	2,395	1,030	26.2	540	33.1	11,755	101	68.9
New York, Chi. & St. L..1930	16,095	9,107	25,202	7.8	27,635	1,865	673	20.9	507	39.4	7,693	100	75.6
1929	11,846	13,579	25,425	6.3	25,661	1,856	719	21.5	656	46.1	10,016	106	93.6
Pere Marquette 1930	10,655	6,460	17,115	3.6	21,987	1,544	601	24.0	468	32.0	3,637	93	70.2
1929	9,480	11,108	20,588	3.3	20,611	1,510	642	25.2	546	34.5	5,162	105	88.3
Pitts. & Lake Erie.....1930	16,159	6,345	22,504	5.8	37,414	3,072	1,744	45.6	262	9.5	25,458	100	48.9
1929	9,351	11,355	20,706	6.2	32,301	2,786	1,625	44.9	366	12.5	32,790	111	77.9
Wabash 1930	19,986	10,329	30,315	3.3	30,310	1,786	648	21.3	520	38.6	6,314	112	66.1
1929	14,256	15,911	30,167	2.4	28,557	1,756	665	21.4	629	44.9	7,604	116	85.8
Central Eastern Region:													
Baltimore & Ohio.....1930	78,542	26,550	105,092	5.8	25,641	2,222	985	30.0	503	27.9	9,538	141	59.7
1929	62,953	39,969	102,922	5.0	23,516	2,125	996	31.2	660	34.0	12,270	143	73.1
Big Four Lines.....1930	22,578	23,034	45,612	3.9	31,661	2,142	985	30.0	500	27.3	8,405	107	54.6
1929	17,126	24,479	41,605	4.7	28,277	2,091	954	30.2	662	36.7	10,133	115	70.6
Central of New Jersey...1930	16,620	9,189	25,809	8.0	26,831	2,243	1,047	32.5	315	17.1	11,729	131	53.3
1929	13,659	12,842	26,501	6.9	24,801	2,078	990	32.1	362	19.0	13,910	132	60.7
Chicago & Eastern Ill....1930	13,017	3,196	16,213	48.8	26,632	1,665	731	26.9	303	17.3	5,185	121	45.2
1929	11,630	4,696	16,326	44.3	25,810	1,709	771	27.0	392	21.8	6,770	123	50.2
Elgin, Joliet & Eastern..1930	9,644	5,708	15,352	3.8	16,144	2,107	1,079	39.9	269	11.2	9,123	117	45.1
1929	8,087	8,009	16,096	6.1	14,731	2,146	1,117	38.6	316	12.9	11,224	128	58.5
Long Island 1930	710	6,442	7,152	0.9	7,667	1,055	409	27.4	97	6.5	1,741	263	46.9
1929	713	6,537	7,250	1.1	5,761	807	324	26.4	83	5.6	1,499	358	54.5
Pennsylvania System.....1930	228,548	74,006	302,554	4.9	30,435	2,455	1,090	29.4	437	23.7	12,383	119	57.1
1929	192,415	97,060	289,475	4.8	27,827	2,439	1,135	30.9	577	29.2	15,545	122	66.0
Reading 1930	32,236	11,435	43,671	4.4	22,378	2,027	965	35.0	434	21.2	13,101	138	60.6
1929	22,042	18,058	40,100	6.1	21,280	1,992	1,000	34.0	536	24.8	14,800	143	64.7
Pocahontas Region:													
Chesapeake & Ohio.....1930	43,227	10,381	53,608	2.4	40,564	3,233	1,739	45.8	1,270	50.7	21,872	83	63.7
1929	32,811	17,659	50,470	2.2	36,870	3,021	1,643	44.5	1,420	56.9	23,267	87	70.9
Norfolk & Western.....1930	34,966	7,262	42,228	0.9	43,477	3,183	1,659	44.1	993	39.3	18,799	113	58.4
1929	26,408	10,962	37,370	1.0	44,361	3,339	1,802	45.6	1,443	53.9	24,181	116	72.0
Southern Region:													
Atlantic Coast Line.....1930	26,747	6,637	33,384	7.0	19,824	1,324	486	20.6	296	23.5	1,917	111	45.7
1929	20,809	7,144	27,953	5.3	19,608	1,394	518	20.2	354	27.6	1,921	112	42.0
Central of Georgia.....1930	6,693	2,913	9,606	11.7	20,246	1,394	553	21.6	450	30.7	2,275	127	54.1
1929	4,140	5,214	9,354	4.1	19,883	1,395	595	22.2	589	36.3	2,902	131	63.2
Ill. Cent. (inc. Y. & M. V.)1930	47,205	17,317	64,522	7.2	25,534	1,820	726	26.7	626	39.4	6,032	127	62.4
1929	36,991	28,853	65,844	3.2	24,234	1,817	779	27.3	802	45.6	7,890	130	82.2
Louisville & Nashville....1930	47,976	11,587	59,563	11.7	21,864	1,554	744	33.7	577	29.2	6,544	132	71.4
1929	40,029	16,035	56,064	11.6	20,659	1,545	742	33.2	723	36.7	7,729	140	86.3
Seaboard Air Line.....1930	16,286	5,424	21,710	4.3	19,480	1,418	534	21.9	432	31.4	2,095	129	60.1
1929	14,230	7,516	21,746	6.7	18,355	1,423	567	21.7	449	30.6	2,182	129	57.5
Southern 1930	53,450	14,500	67,950	13.3	19,941	1,364	532	21.9	344	24.4	3,504	150	46.4
1929	46,961	20,586	67,547	12.7	19,642	1,400	577	22.2	438	29.0	4,426	152	56.3
Northwestern Region:													
Chi. & North Western...1930	50,749	25,470	76,219	8.9	22,156	1,626	624	24.5	374	25.5	3,371	128	56.7
1929	46,096	32,799	78,895	7.1	21,233	1,624	643	23.5	441	30.2	4,116	126	71.1
Chi. Gt. Western.....1930	4,293	4,881	9,174	6.7	29,308	1,970	720	21.8	763	57.0	4,797	130	104.2
1929	5,067	5,350	10,417	6.6	25,776	1,887	718	22.1	718	51.2	5,125	130	91.3
Chi., Milw., St. P. & Pac..1930	58,773	18,793	77,566	2.3	24,384	1,807	724	24.9	494	32.7	3,390	120	62.8
1929	50,510	29,652	80,162	2.7	23,852	1,832	779	25.3	589	36.2	4,201	123	73.3
Chi., St. P., Minn. & Om..1930	2,611	9,746	12,357	7.8	17,958	1,305	518	23.5	415	28.6	2,993	118	63.7
1929	2,491	9,564	12,055	5.6	16,686	1,259	517	23.4	451	28.4	3,155	122	69.7
Great Northern 1930	42,370	13,283	55,653	4.8	32,724	2,517	1,052	27.3	656	39.4	4,377	111	57.7
1929	40,268	17,208	57,476	4.0	31,017	2,531	1,149	28.9	741	40.6	5,108	118	67.8
Minn., St. P. & S. St. M..1930	19,947	4,781	24,728	4.1	20,697	1,630	719	24.9	415	25.1	2,355	96	67.5
1929	19,265	7,523	26,788	2.8	20,409	1,668	748	24.7	477	28.3	2,925	97	78.6
Northern Pacific.....1930	39,549	6,287	45,836	8.5	26,059	1,949	813	24.3	457	28.1	3,241	143	57.4
1929	35,783	9,084	44,867	7.2	25,437	1,952	850	24.7	575	33.9	3,989	144	62.8
Ore.-Wash. R.R. & Nav..1930	7,608	3,489	11,097	4.7	23,701	1,738	736	25.7	459	26.7	2,298	157	53.5
1929	7,250	4,254	11,504	3.6	23,210	1,798	801	25.6	512	28.2	2,624	161	59.4
Central Western Region:													
Atch., Top. & S. Fe (incl. P. & S. F.).....1930	64,161	15,603	79,764	7.5	34,967	2,125	681	19.8	588	47.6	4,163	101	84.2
1929	53,097	22,822	75,919	5.2	32,680	2,108	713	20.5	739	56.7	4,994	104	95.5
Chicago & Alton.....1930	10,031	4,160	14,191	6.5	24,347	1,539	579	23.8	391	26.9	5,555	134	71.1
1929	8,717	4,882	13,599	4.7	23,016	1,578	594	23.3	445	29.6	6,056	140	76.0
Chi., Burl. & Quincy....1930	45,807	19,050	64,857	5.5	27,140	1,947	849	26.6	614	39.0	4,292	116	66.0
1929	39,763	26,467	66,230	4.3	26,218	1,946	871	26.7	721	43.7	5,126	121	72.1
Chi., Rock I. & Pacific..1930	35,953	15,928	51,881	8.1	22,908	1,594	632	23.9	484	32.6	3,309	145	61.5
1929	27,619	25,770	53,389	5.0	20,520	1,533	631	24.6	605	38.7	4,258	139	80.5
Denver & R. G. Wn.....1930	11,795	5,151	16,946	2.4	21,273	1,605	585	22.0	504	37.1	3,383	159	74.2
1929	10,636	7,327	17,963	2.9	18,470	1,566	627	22.9	518	34.6	3,629	172	74.4
Oregon Short Line.....1930	8,912	5,716	14,628	4.5	27,087	1,949	753	24.5	682	44.9	3,930	109	84.2
1929	7,894	6,055	13,949	4.6	24,390	1,839	732	24.5	806	51.0	4,430	120	93.7
So. Pacific—Pacific Lines.1930	41,237	25,161	66,398	7.2	28,826	2,083	701	20.7	563	43.0	4,158	113	69.2
1929	38,342	29,225	67,567	5.9	25,093	1,965	718	22.1	674	46.3	5,079	118	84.3
Union Pacific 1930	22,919	11,710	34,629	8.5	42,716	2,134	686	19.0	1,104	91.3	10,151	102	125.8
1929	18,488	12,745	31,233	5.0	38,302	2,027	681	19.8	1,333	104.0	11,060	106	135.3
Southwestern Region:													
Gulf, Colo. & S. Fe....1930	11,673	3,099	14,772	3.0	31,799	2,155	851	24.3	416	27.7	3,129	93	63.4
1929	11,061	6,383	17,444	3.7	31,956	2,218	941	25.9	502	30.2	4,533	90	77.6
Mo.-Kans.-Texas Lines...1930	14,086	5,948	20,034	5.2	27,805	1,975	763	23.1	472	34.3	2,977	89	54.7
1929	14,975	8,715	23,690	5.9	28,509	2,111	823	22.7	515	37.2	3,839	90	64.5
Missouri Pacific 1930	31,128	17,928	49,056	9.9	27,617	1,826	730	25.2	709	45.8	4,685	119	81.4
1929	26,529	30,810	57,339	4.2	24,107	1,784	753	25.1	705	42.8	5,449	126	88.6
St. Louis-San Francisco..1930	25,308	8,098	33,406	3.2	21,034	1,565	608	23.8	434	30.4	2,806	133	54.5
1929	20,525	13,724	34,249	3.1	19,157	1,465	605	24.4	560	36.2	3,681	142	68.3
Texas & New Orleans...1930	11,778	12,943	24,721	5.4	21,064	1,511	580	23.3	465	32.2	2,446	94	59.1
1929	10,297	16,783	27,080	3.7	19,633	1,436	563	23.0	549	36.8	3,160	94	81.1
Texas & Pacific.....1930	5,856	4,963	10,819	6.9	25,611	1,796	672	23.4	722	51.7	4,001	89	47.6
1929	4,981	8,785	13,766	5.0	22,462	1,731	675	24.1	704	47.4	4,971	90	68.7

News of the Week

(*Continued from page 1341*)

ernment have any intention of interfering with the internal management of the Canadian National, nor have we thought of anything but the most scrupulous fair dealing toward that railway, and Sir Henry Thornton has recently assured the public that he has no apprehensions in this regard. So I trust that those who are worried may cease from troubling until they see some cause for misgiving."

Cab Signal Hearing December 23

The Interstate Commerce Commission has postponed to December 23 its hearing on the Pennsylvania's application for a modification of its automatic train control specifications to permit the use of cab signals without braking apparatus.

New Cotton Rates Postponed

The Interstate Commerce Commission has postponed from January 10 to May 28 the effective date of its order of July 15, prescribing an extensive revision of freight rates on cotton, Part 3 of the rate structure investigation, at the petition of the southwestern and southeastern carriers.

Proposed Amendment to Interstate Commerce Act

Bills have been introduced in Congress by Chairman Couzens of the Senate committee on interstate commerce and Chairman Parker of the House committee on interstate and foreign commerce to amend section 16a of the interstate commerce act so as to provide that shippers as well as carriers may appeal to courts for a review of rate orders of the Interstate Commerce Commission.

Trans-Missouri-Kansas Shippers' Board

Forecasts of carloadings of 28 commodities in the territory of the Trans-Missouri-Kansas Shippers' Board for the first quarter of 1931 show a decrease of 4.4 per cent as compared with the same period of 1930, the total carloadings being estimated at 393,680 for the first quarter of 1931 as compared with 411,730 carloads in the same period of 1930. Automobile shipments are expected to decrease 45 per cent, ore shipments 38 per cent, sugar, syrup and molasses shipments 36 per cent, and clay product shipments 27 per cent, while potato shipments will increase 20 per cent, and lumber and forest product shipments will each increase 10 per cent.

Congressmen Want Low Rates for Mail by Bus

The House of Representatives on December 10 voted to recommit to its committee on postoffices and post roads a bill to authorize the Postmaster General to permit railroad and electric-car companies to provide mail transportation by motor vehicle over highways in lieu of service by train, at a rate not in excess of the rate that would be allowed for similar service by railroad. It was explained that this was to take care of situations where railroads have discontinued branch line trains. Objections were made by a number of Representatives because the bill did not provide for a lower rate for motor-vehicle transportation so that the government could obtain the benefit of this "cheaper" form of transportation. It was explained that the committee had before it the express statement of Postmaster General Brown that in no case would he allow a railroad to carry mail under this provision unless it should be at a lower rate.

Railroads, Buses and Trucks

The motorbus and the motor truck are great modern transportation conveniences. They are highly valuable to the public. Even so, it is not in accordance with sound policy, nor is it in accordance with common justice to allow them to be the recipients of inordinate favor at the expense of another and older transportation medium, which, in the beginning, made a continent-wide United States possible.

We cannot believe there is any chance for successful dispute of an assertion that the motor vehicle lines are excessively favored and are allowed material special privileges to the direct embarrassment and injury of the steam roads and to the endangerment of the welfare of the country.

It is true that owners of trucks and buses pay certain license fees and certain taxes, but those assessments are inconsequential compared with the assessments and expenses which burden the steam roads. While the latter, in addition to the sums they contribute to the public treasury yearly, are obliged to devote tens of millions of dollars to maintenance of private rights of way, tracks, roadbeds and other extensive properties, and, besides that, are subjected to strict regulation by the interstate commerce commission, which says how much they are to charge and how much they may earn, and how far they may expand or contract, the commercial motor vehicles are practically a law to themselves. They use public highways at almost no cost. They run as they please, and the general taxpayers meet most of the expense of wear and tear. They can charge what they choose. And those engaging in interstate commerce are, to all intents and purposes, without any sort of regulation whatever.

We are not failing to appreciate the value of the commercial motor vehicle lines. They are a big asset to the country. It would be difficult to get along without them. They must be treated fairly. But they ought not to be coddled at the expense of others. And we believe the public interest demands a termination of what is substantially a condition of favoritism through gross negligence.—From the Detroit Free Press.

Twenty Die in Mexican Derailment

An extra freight train, composed mostly of circus equipment, was derailed on the Aguascalientes division of the National of Mexico east of Rivera, Gto., between Irapuato, Glo., and Guadalajara, Jal., on November 26, resulting in the death of 20 persons. An investigation showed that the derailment was caused by defective ties in the track. Following the derailment two tank cars of gasoline exploded and the combustible parts of the rolling stock was destroyed by fire. Many of the animals in the circus cars were burned to death. The circus suffered a loss of $150,000.

Pacific Northwest Shippers' Board

A probable decrease in carloadings of 10 per cent for the first quarter of 1931 is shown by the commodity reports presented at the meeting of the Pacific Northwest Shippers' Advisory Board at Portland, Ore., on December 13. An increase of 63 per cent is expected in the shipment of fresh vegetables, 28 per cent in the shipments of canned fruits and vegetables, 26 per cent in the shipments of fresh fruits, 25 per cent in the shipments of poultry and its products and 23 per cent in the shipment of cement and concrete products, as compared with the first quarter of 1930. Shipments of automobiles and automobile supplies are expected to decrease 94 per cent, dried fruit 58 per cent, ores and concentrates 44 per cent, clay products and lime 35 per cent and lumber and forest products 20 per cent as compared with the first quarter of 1930.

Among the speakers at the meeting were Paul Shoup, president of the Southern Pacific and Nathan B. Eckstein, president of Schwabacher Brothers & Co., Seattle, Wash. Mr. Shoup spoke on various forms of railroad competition, and referred to motor coach and truck service and store door delivery, showing that the railroads are in a position to conduct this business more economically and more efficiently than any other agency.

Mr. Eckstein urged the railroads to exercise a united opposition to unfair competition.

Railway Club Meetings

The Central Railway Club of Buffalo will hold its regular meeting and its forty-second annual dinner at Hotel Statler, Buffalo, N. Y., on Thursday, January 8. The business meeting, at which officers will be installed for the ensuing year, will be held at 2 p.m. and the dinner at 7 p.m.

The New England Railroad Club will hold its next meeting on Tuesday evening, January 13, at the Copley-Plaza Hotel, Boston. T. C. Macnab, engineer of con-

struction of the Canadian Pacific will present a paper on Peace River Surveys and Canadian Pacific branch lines.

The St. Louis Railway Club will hold its next meeting at Hotel Statler, St. Louis, Mo., on Friday evening, January 9. D. L. Forsythe, general road foreman of equipment, of the St. Louis-San Francisco, will present a paper on further possibilities of efficiency in railroad transportation.

The Canadian Railway Club will hold its next meeting on Monday evening, January 12, at the Windsor Hotel, Montreal. Hon. J. H. Rainville, chairman of the Montreal Harbor Commissioners will speak on free ports. Motion pictures will be shown.

The Eastern Car Foreman's Association will hold its next meeting at 29 West 39th street, New York City, on Friday evening, December 26. T. G. Case, Grand Central Terminal, will speak on "Modern Methods of Passenger Car Cleaning" and the subject will be illustrated by motion pictures. The election of officers of the club will take place at this meeting.

The Car Foremen's Association of Omaha, etc., will hold its next meeting on Thursday afternoon, January 8, at 2 o'clock, with the Union Pacific at Council Bluffs, Ia. E. R. Phillips, C. & N. W., will report on the loading of structural steel and bridge material. There will also be a discussion on wheels.

The Car Foreman's Association of Chicago will hold its next meeting on Monday evening, January 12, at the Great Northern Hotel, Chicago. The evening will be devoted to discussion of the new A. R. A. Rules.

Hearing on T. & P. Extension

Texas & Pacific officers presented testimony in favor of the construction of the 333 miles of projected line of the Texas & Pacific Northern at an Interstate Commerce Commission hearing before Examiner Haskell C. Davis at Lubbock, Tex., from December 8 to 13. J. B. Payne, vice-president in charge of traffic of the T. & P., stated that that road will ask that common point territory be extended and that differentials to points on the proposed line be abolished if authority for construction is granted.

The line will strengthen the milling and storage privileges of grain and wheat dealers at Fort Worth, Tex., Dallas, Denton, Sherman, Paris and other points by enabling them to buy wheat from a section which is not now available to them, Mr. Payne said. He pointed out that cotton dealers would similarly be benefited and gave examples of the reduction of rates through the abolition of existing differentials.

J. L. Lancaster, president of the Texas & Pacific, stated that the proposed line with an expenditure of $13,000,000 is designed to protect an investment of more than $65,000,000 which that road has made during the past 11 years between Texarkana, Tex., and El Paso. He contended that the actual and potential wealth of the 25,000,000 square miles of territory in the Panhandle and South Plains sections of Texas require the service of a fourth competitive rail system, adding that the very existence of the Texas & Pacific requires the development of additional traffic.

Opposition to the granting of this construction application was voiced by officers of the Atchison, Topeka & Santa Fe, the Chicago, Rock Island & Pacific and the Chicago, Burlington & Quincy. They declared that the area in question is already amply provided with rail transportation. Civic organization representatives testified in favor of the proposed line.

Equalized Competition Urged by Security Owners

A resolution urging that competing forms of transportation be placed on an equalized taxation and regulatory basis with the railways was adopted on December 10 by the executive committee of the National Association of Owners of Railroad and Public Utility Securities. The resolution also opposes the policy of the Federal and State governments in competing with privately-owned railroads by means of government-owned and operated or subsidized barges and other facilities. It was finally urged that regulatory bodies should grant railroads a respite from "the constant whittling away of rates and from compulsory expenditures for non-productive properties."

The resolution follows in full:

WHEREAS the railroads of the United States are passing through a period of economic readjustment that involves every phase of our national life, and

WHEREAS the railroads have been called upon to sustain unduly heavy burdens in this period of severe trial.

THEREFORE BE IT RESOLVED that the National Association of Owners of Railroad and Public Utility Securities is opposed to the policy of Federal and State governments competing with privately owned railroads by means of government owned and operated or subsidized barges and other facilities, purchased and maintained at the expense of the taxpayers. In the development of waterway transportation due attention should be paid to adequate toll charges in order that the railroads will not be placed at a disadvantage in competition. As far as possible such waterway transportation should afford a supplementary service to the railroads.

FURTHER BE IT RESOLVED that Federal regulation of interstate transportation by motor busses and motor trucks is essential to the welfare of the railroads and the transportation of the country in the public interest. There should also be adequate taxation of motor transport companies comparable to the taxation levied upon the railroads.

FURTHER BE IT RESOLVED that all agencies of such highway transportation should be required to obtain certificates of public convenience and necessity and provide adequate guaranty of their financial responsibilities, including insurance. Rates of such agencies should be regulated by Federal or State bodies and adherence to these rates required as in the case of the railroads; thereby eliminating discriminatory rates. Railroads should be given full permission to own and operate motor vehicles, either freight or passenger, supplementary to their rail service. All restrictions relating to such rights under present law should be remedied.

FURTHER BE IT RESOLVED that all agencies operating pipe lines for the transportation of any commodity should be subject to the same degree of taxation and regulation as the railroads.

FURTHER BE IT RESOLVED that river, lake and ocean vessels competitive to the railroads and subject to the jurisdiction of the Federal Government shall carry an equalized burden of taxation and be regulated to the same extent as the railroads.

FURTHER BE IT RESOLVED that regulatory bodies should grant the railroads a respite from the constant whittling away of rates and from compulsory expenditures for non-productive properties which merely increase their operating expenses.

FURTHER BE IT RESOLVED that this Association, representing a large accumulation of capital invested in the railroads, has confidence in the security of that capital and its further productivity not only for its owners but the nation at large. This Association believes that the railroads remain and will retain their position as the principal means of transportation. While the Association recognizes the inherent right of operation of all useful methods of transportation it insists that the carriers by rail shall be given an equality of opportunity, under fair terms of competition.

GLAZED TILE TANKS FOR ASHES.—The vitrified, glazed-tile ash-storage tank, developed to provide complete facilities of ash storage for all types of ash-conveyor systems, is described in the 16-page illustrated booklet issued by the United Conveyor Corporation, Old Colony building, Chicago. The tile is unaffected by hot ash and its glazed surface is impervious to moisture or acid, and large dead air spaces protect the storage contents from freezing.

* * * *

Near Stalden, on the Recently Electrified Visp-Zermatt Railway, Switzerland

Foreign

Electrification of Norwegian Railroads Projected

Present low prices of copper and steel have revived the project of electrifying more of the Norwegian railroads, according to Commercial Attache Marquard H. Lund, Oslo, Norway, in a report to the Department of Commerce. At present, only a very small mileage is electrified, but inasmuch as an abundance of electrical power is available along the right-of-way on almost all the Norwegian railroads, electrification is considered one of the projects which must have attention in the future. It will probably be done by degrees, and it is not improbable that the line going south from Oslo into Sweden will be considered first. The whole project is dependent upon the funds available, but as the situation is particularly favorable at this time, because of low prices on materials, the present agitation may develop into something more concrete in the near future.

Budd Analyzes Problems of Soviet Railways

Soviet railways are functioning normally and freight and passengers are being moved with fair promptness, according to Ralph Budd, president of the Great Northern, writing in the December issue of the Economic Review of the Soviet Union, published by the Amtorg Trading Corporation, New York. Mr. Budd, who spent a large part of last summer on a comprehensive tour of investigation over much of the Soviet railway system, also makes a number of recommendations for improving the railway operations to enable them to handle the rapidly increasing volume of freight resulting from the economic development of the U.S.S.R. He is of the opinion that, since the geographical conditions in Soviet Russia are so similar to those of the United States and Canada, American railway technique should be employed in the reorganization of the Soviet railway system.

Mr. Budd's article follows, in full:

During our visit in the Union of Socialistic Soviet Republics, we found the railways functioning quite normally and freight and passengers being moved with fair promptness. During 1929, the average density of freight traffic was 90 per cent of the average for the railways of the United States and the density of passenger traffic was more than three times as great. With the increase which has occurred in the U.S.S.R. this year, the railways probably will handle more tons of freight per mile of road than will those of the United States.

While the traffic density is as great as in the United States. the volume of traffic is much less. The U.S.S.R., with a greater population and vastly greater area, has less than one-fifth of the railway mileage of the United States. The amount of traffic, however, has been increasing rapidly and the industrialization program which is being carried on is increasing the movement of freight on existing railways and requires the construction of new lines. The Turk-Sib (Turkestan-Siberian) line, 890 miles in length, has been practically completed and will be in regular operation by the end of 1930. Other railway lines are under construction. The problem of constructing new branch railway lines to serve new territory is similar to the problems met by the railways of the western United States during the past fifty years and after the first through lines were built.

The problem of handling an increase in traffic on existing lines is a more difficult problem because a change in the system of railroading and in the types of equipment and facilities is necessary to handle this traffic with the greatest economy. The present system of railroading is that used in other European countries. Locomotives and 90 per cent of freight cars are small and trains are of light tonnage. The consequence is that many trains must be run to move the traffic and the many trains require double tracking where in America a single track line with heavier trains would be sufficient.

The Russian trains are dispatched from station to station and it is necessary for a train to clear a station before a following train may be dispatched from the preceding station. The American dispatching system is not used and block signaling has only been installed on a few miles of track more as an experiment than as a part of a general signal system. The European system of railroading is possibly very well adapted to the conditions of the smaller European countries where length of freight movement is short and heavy tonnage trains are not desirable, but the same system is not economical where hauls are long and there is much bulk freight, as in the United States and in the U.S.S.R.

As distinct from the European system, the American system of railroading is predicated upon the use of heavy trains drawn by heavy and powerful locomotives. Large capacity freight cars are used (3 to 4 times the size of those commonly used in the U.S.S.R.). Locomotives are equipped with tenders having a capacity as large as 22,000 gallons, making long runs between fuel and water stations feasible. Trains are operated on time-table schedules or special orders transmitted from a train dispatcher to the train crews. The train crews are responsible for the safe and speedy handling of trains and not the station masters. This system has proved very satisfactory in the United States and should be found equally satisfactory in the U.S.S.R. where conditions are strikingly similar.

The topography of the U.S.S.R. is like that of the western United States except that a lesser proportion of the former is mountainous and the mountains that are crossed by its railways are lower and less precipitous than those over which American railways operate. In general the climate in any state west of the Mississippi can be found duplicated in the U.S.S.R. although extreme winter temperatures in a few parts of the U.S.S.R. are lower than temperatures within the United States. Moreover, the commodities handled are much the same in the two countries; farm products, coal, ore, and oil predominate. While distances in the U.S.S.R. are greater, the haul of the principal commodities and the distances over which the heaviest traffic is handled are not unlike those of America, so that the average haul of all freight is only 40 miles longer than in the United States.

In order to handle the large increases in traffic which are expected in the U.S.S.R., there must be additional trackage and railway equipment. Train tonnage cannot be increased generally because of lack of strength of couplings of cars as well as inadequacy of motive power. The first and most difficult change to be made is from the screw car couplings with side bumpers to the automatic coupling. With automatic couplings and tracks strengthened by placing additional ties, it will be possible to place in service locomotives heavy enough to increase train weights by 50 per cent. The extension of the use of air brakes on freight equipment from the 10 per cent of cars now equipped to complete equipment with such brakes will have to follow as fast as possible. New freight equipment purchased would be of modern design and large capacity, and eventually the present cars of 16½ tons or less should be scrapped.

As the size of motive power is increased and the length of trains increased, the length of terminal tracks and size of terminal facilities will have to be increased. In the interests of economy, gradients, which on main lines are now generally steeper than are necessary, should be reduced. For safety and economy in operating trains, block signaling should be introduced on the heavy traffic lines as soon as 30 per cent of the cars are equipped with air brakes. With the increase in weight of motive power, a heavier track structure must be adopted, with not only more ties but larger ties, heavier rails, heavier and better fastenings, and better ballast. Many hand operated facilities should be replaced with mechanical facilities.

While this is a large and expensive program, like work has been accomplished in America, where during the past 25 to 30 years main line tracks have been rebuilt, terminal facilities have been enlarged, and equipment has been replaced with new, larger, and more efficient equipment. The difference in problem in the U.S.S.R. lies largely in the time element. Aside from the necessity for at once changing from the screw coupler to the safe automatic coupler, strong enough for use in heavy trains. and for the speed which may be required for other improvements in order to meet the conditions imposed by the industrialization program, the problem facing the Russian railways is similar to that which has been met and solved by every great railway system in the United States.

Equipment and Supplies

Freight Cars

THE MISSOURI - KANSAS - TEXAS has ordered 25 caboose cars from its own shops.

THE FRUIT GROWER'S EXPRESS is now inquiring for 20 underframes for refrigerator cars.

THE BESSEMER & LAKE ERIE is inquiring for 1,000 to 1,200 steel hopper cars of 90 tons' capacity.

THE CITY OF CHICAGO ordered one hopper car from the Mt. Vernon Car Manufacturing Company.

THE BOARD OF TRANSPORTATION, New York City, will issue inquiries soon for 26 miscellaneous service cars.

THE NORTH AMERICAN CAR CORPORATION, Chicago, is constructing 50 mechanical refrigerator cars, known as Frigicars, in its own shops. Upon completion, these cars will be leased to industries or railroads.

THE ATCHISON, TOPEKA & SANTA FE has ordered 22 steel caboose cars 29 ft. long from the American Car & Foundry Company. There was an additional 50 box cars placed with the General American Car Company making a total of 350 to this company in the order which was reported in the *Railway Age* of December 13 as 1,450 cars.

Passenger Cars

THE ATCHISON, TOPEKA & SANTA FE has ordered two cafe cars from the Pullman Car & Manufacturing Corp. Inquiry for this equipment was reported in the *Railway Age* of November 8.

Iron and Steel

THE UNION PACIFIC is inquiring for 500 tons of structural steel for a viaduct in Omaha, Neb.

THE CHICAGO GREAT WESTERN has ordered 1,640 tons of structural steel for bridge work in 1931, from the American Bridge Company.

THE ILLINOIS TERMINAL has ordered 6,000 tons of structural steel for subway work at St. Louis, Mo., from the McClintic-Marshall Company.

THE CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC has ordered 1,000 tons of structural steel for miscellaneous bridge work from the American Bridge Company.

THE WABASH has ordered 4,000 tons of rails from the Inland Steel Company, 5,500 tons from the Illinois Steel Company, and 1,000 tons from the Bethlehem Steel Company.

Pennsylvania Inquiring for 200,000 Tons of Rail

The Pennsylvania is asking for bids for 200,000 tons of steel rails for delivery during the year 1931.

The order will total over $8,500,000 and attachments for laying this rail, including frogs, switches, splices, tie plates, rail anchors, bolts and spikes will increase the year's expenditures for laying new rail to more than $15,000,000.

The rail order for 1931 will be utilized in pushing the railroad's improvement program, which calls for extensive renewal and for the substitution of heavier rail in all main track. Standard rail weighing 130 pounds to the yard is rapidly replacing in main track all lighter-weight rail on the Pennsylvania. The 1931 order will consist almost entirely of this weight of rail.

Steel rail orders authorized by the Pennsylvania during the last ten years totalled 1,758,000 tons.

Signaling

THE ERIE has ordered from the Union Switch & Signal Company 50 style H searchlight signals, 240 relays and other material for use in connection with the installation of automatic block signals on its line between Rutherford, N. J., and Passaic drawbridge; and between Hammond, Ind., and Griffith.

The report of the Interstate Commerce Commission for the period, November 1, 1929, to October 31, 1930, is of more than ordinary interest in two respects, viz., "Reparation" and "Recapture." The first of these is worth primary consideration. * * *

The principal suggestion that the Commission makes for relief concerns the "statutory period" within which complaints may be filed. At present this period is two years for complaints under the first four sections of the act, i. e., unreasonableness, discrimination, undue prejudice, and violation of long and short-haul clause. The Commission would shorten this to 90 days. For complaints under Section 6, i.e., for "overcharges" by the levying of rates for which there is no tariff authority, the present period is three years. The Commission would shorten this to six months. The suggestion is good and there is no reason in logic or practice why it should not be made effective. ...

—Thomas F. Woodlock in the Wall Street Journal

Supply Trade

I. L. Ward has been appointed Pacific Coast representative for the **Union Railway Equipment Company**, with office at 503 Market street, San Francisco, Cal.

The Centrifix Corporation, Cleveland, Ohio, has appointed the **Wyman Engineering Sales Company**, Cincinnati, Ohio, its representative in the Cincinnati district.

The Southern Manganese Steel Division of the **American Manganese Steel Co.**, has transferred all matters pertaining to sales from St. Louis, Mo., to the general offices of the American Manganese Steel Company, Chicago Heights, Ill.

The general office of **A. E. Pratt**, manager, and the eastern office of **F. H. Crawford**, manager of the transportation sales department of **E. I. du Pont de Nemours & Company, Inc.**, Wilmington, Del., will be moved on January 2 from Parlin, N. J., to 1616 Walnut street, Philadelphia, Pa. This department handles the sale of paint and varnish products to steam railroads, electric railways and the marine industry.

S. H. Taylor, Jr., has been placed in charge of the Pacific Coast office of the **Lincoln Electric Company**, with headquarters at Los Angeles, Cal., to succeed **W. S. Stewart**, who has been appointed district manager of the Cleveland territory, with headquarters at Cleveland, Ohio. **L. P. Henderson** has been appointed manager of the San Francisco office, and **E. J. Pfister** has been appointed district manager of the Kansas City district, with headquarters in the R. A. Long building.

The Westinghouse Electric & Manufacturing Company plans to make improvements to cost over $300,000 at its South Philadelphia, Pa., works. The company contemplates alterations and additions to include the conversion of part of the manufacturing space into a new shop, where all locomotive equipping and testing activity in connection with Westinghouse oil-electric and electric locomotives will be concentrated. The plans also call for laying one and one-half miles of additional railroad track involving the handling of more than 12,000 cu. yd. of material in connection with new construction within the plant area; in connection with the Pennsylvania Railroad and the City of Philadelphia, the electrification, relocation and regrading of four miles of trackage to be used as a high-speed test track will be carried out.

Obituary

A. W. Willcuts, assistant manager of the railroad sales department of Joseph T. Ryerson & Son, Inc., with headquarters at St. Louis, Mo., died on December 14 from heart failure.

Construction

CHESAPEAKE & OHIO.—This company has authorized the elimination of a grade crossing at Winchester Pike, Canal Winchester, Ohio, at a probable cost of $104,627, and has awarded to J. P. Pettyjohn & Company, Lynchburg, Va., a contract for the construction of a combination station at Martin, Ky., to cost about $41,550.

CITY OF ST. LOUIS.—The City of St. Louis, Mo., has completed preliminary plans for the construction of a new reinforced concrete and steel viaduct to carry Fyler avenue over the tracks of the St. Louis-San Francisco at McCausland avenue and the intersection with Picadilly and Manhattan avenues in that city, at a cost of about $500,000. It is expected that the work of repairing the Twenty-First street viaduct over the Terminal Railroad Association and the Missouri Pacific tracks in Mill Creek Valley, which was damaged by a locomotive derailment in 1928, will be undertaken by the city early in 1931, at a cost of about $50,000.

DELAWARE, LACKAWANNA & WESTERN.—The recent location of a 1,000-bed hospital by the United States Veterans' Bureau at Lyons, N. J., has made it necessary for this company to construct a new station at that point. Accordingly, a contract has been signed for the construction of a passenger and freight structure of modified old English design, to be of combination brick and stucco on cinder-block, with roof of slate and sash of steel. The building will be 50 ft. by 20 ft., with front and rear bays, and set back 28 ft. from center of track to admit of appropriate landscape gardening. A timber canopy 150 ft. long will be erected between the track and the station proper to afford protection for passengers getting on and off trains. Carl S. Rollerson of Plainfield, N. J., the successful bidder, plans to complete the station in 60 working days.

ILLINOIS TERMINAL.—A contract for the fabrication of about 6,000 tons of structural steel for the framework of the double-track subway being constructed under Twelfth street at St. Louis, Mo., has been let to the McClintic-Marshall Company, Chicago. It is expected that bids will be received for erection of the steel about February 1.

RAILWAY EXPRESS AGENCY.—This company has taken a 15-year lease on a garage building to be constructed by the J. W. Kopman Construction Company, St. Louis, Mo., in the half block bounded by Spruce, Sixteenth and Fifteenth streets at St. Louis. The structure, which will be constructed of brick and concrete with outside dimensions of 150 ft. by 332 ft., will involve an expenditure of about $150,000. The Railway Express Agency has disposed of its present garage and stable building at Twenty-Second and Eugenia streets in the same city.

Financial

ATLANTIC COAST LINE.—*Abandonment.*—This company has petitioned the Interstate Commerce Commission for a reargument before the full commission on the question of its application for a certificate for the construction of a line from Yuste to Monticello, Fla., to replace a line abandoned without authority from the commission in connection with a relocation.

DENVER & RIO GRANDE WESTERN.—*Acquisition of D. & S. L. Found Conditionally to be in Public Interest.*—The Interstate Commerce Commission has issued a report finding the proposed acquisition by this company of control of the Denver & Salt Lake by purchase of a majority of its stock to be in the public interest and that the terms and conditions proposed are just and reasonable, subject to conditions that it shall purchase for cash at not exceeding $155 a share any shares or voting trust certificates of the D. & S. L. which may be offered it within six months and that the D. & R. G. W., through the D. & S. L., will establish such through routes in connection with any western connection hereafter constructed under authority of the commission as it may find in a subsequent proceeding to be reasonable and in the public interest, and that the companies shall commence the construction of the Dotsero cut-off connecting the two lines within six months from the date of an order, the construction to be completed within two years. No order is entered at this time but the proceedings will be held open for 90 days for the submission by the applicant of its unqualified acceptance of the conditions prescribed. The commission declined to impose a condition, which had been urged by several interveners, requiring the D. & R. G. W. to agree to use the Moffat tunnel, the lease of which is in litigation. Commissioner Eastman dissented, on the ground that the Missouri Pacific, which has a half interest in the D. & R. G. W., has no direct interest in the development of Denver as a gateway and that the full development of the D. & S. L. route west of Denver would affect adversely its route through Pueblo. He said that the D. & S. L. would be in a reasonably strong position if allowed to remain independent. He also thought the applicant should be required to use the Moffat tunnel and that eastern connections should have been included in the condition regarding the establishment of through routes, on the ground that they should be interested in the development of the Denver route and in a possible extension from Craig, Colo., to Salt Lake City.

The construction of the Dotsero cut-off would make possible a saving of 173 miles in distance between Denver and Dotsero via the D. & S. L. as compared with the mileage via the D. & R. G. W. present line.

ELGIN, JOLIET & EASTERN.—*Acquisition.*—This company has applied to the Interstate Commerce Commission for authority to acquire control of the Griffith & Northern, which has a line from Griffith, Ind., to a connection with the Chicago, Lake Shore & Eastern and one from Cavanaugh to Shearson, Ind., a total of 9.19 miles.

ERIE.—*Tax Suit.*—Suit to recover $416,764 paid to the government as income and excess profits taxes for 1921 was filed on December 11 against the Collector of Internal Revenue at New York by the Erie through its attorneys. The suit, a test case, is based on the railroad's contention that no tax should have been paid on $17,877,098 received by the Erie and its affiliated companies from the government for six months of federal control 1920. The complaint explains that this sum was due under government guarantee as an operating income, though the companies themselves estimated the amount due to be $21,727,897. The plaintiff paid the government $606,892 originally in taxes for the year in question and received a refund of the difference between the amount paid and the sum sued for.

INTERMOUNTAIN.—*Abandonment.* — The Interstate Commerce Commission has authorized this company to abandon that part of its line extending from Steirman, Idaho, to Centerville.

MISSOURI PACIFIC.—*Unification Case.*—Oral arguments were heard by the Interstate Commerce Commission on December 11 in the case involving this company's proposed lease of 22 subsidiary lines, which was re-opened for argument on the questions as to whether the Missouri Pacific should be required to maintain general offices and shops at Palestine, Tex., and whether it should be required to maintain existing routes.

NASHVILLE, CHATTANOOGA & ST. LOUIS.—*Abandonment.*—This company has applied to the Interstate Commerce Commission for authority to abandon its Swan Creek branch, from Stewart's to Rochelle and from Centreville to Arnold, Tenn., 8.36 miles.

SOUTHERN.—*Dividends.*—This company on December 11 declared the regular final quarterly dividend of $2 a share for this year and in addition a dividend of $2 for the first quarter of 1931 and another of $1.65 for the second quarter of 1931. This action was in conformity with the recent statement of Fairfax Harrison, president, that the road had devised a means to maintain dividend disbursements at the current rates in 1930 and in at least part of 1931. A provision of the company's charter as to the declaration of dividends in years in which they are not earned caused uncertainty at one time as to the company's dividend policy. Funds for the Southern's dividends had been previously provided in part by the declaration of extra dividends by railroads which it controls. Yesterday the Chicago, Indianapolis & Louisville went on a $7 regular annual basis, compared with pre-

vious regular disbursements of $2.50 semi-annually and $1 extra. The Mobile & Ohio declared the usual extra of $5. The C. N. O. & T. P. and the Alabama Great Southern had previously made extra disbursements.

In announcing its action the Southern issued the following statement:

The estimate of the income for 1930 which was before the board today was of earnings of $4.61 per share on the common stock after providing for regular dividends on the preferred stock. Considering that during the six years ended Dec. 31, 1928, the Southern distributed to its common stockholders little more than one-half of its earnings available for dividends on the common stock, the board desires, so far as it may, to continue to the common stockholders during the calendar year 1931 an aggregate distribution equivalent to the 8 per cent paid them during several previous years. A resolution was therefore adopted declaring as dividends on the common stock the remainder of the income of 1929 not previously appropriated for this purpose, namely $3.65 per share, payable $2 on May 1 and $1.65 on Aug. 1, 1931. This is in addition to the declaration of the final quarterly dividend of $2 per share for 1930, payable Feb. 2, 1931.

It is the purpose and expectation of the board to review the situation at its June meeting and then determine, in the light of industrial conditions and the prospect for traffic then appearing, to what extent it is proper to supplement these dividends out of the income of 1930.

SOUTHERN PACIFIC.—*Acquisition.*—This company has applied to the Interstate Commerce Commission for authority for the acquisition of a joint interest in a proposed line of 35 miles to be built by the Oregon Electric in Lane county, Ore.

SOUTHERN PACIFIC.—*Acquisition.*—The Interstate Commerce Commission has authorized the acquisition by this company of control of the Gulf & West Texas by purchase of its capital stock and has authorized the Gulf & West Texas to issue $300,000 of common stock for the purposes of constructing its proposed line.

Average Prices of Stocks and of Bonds

	Dec. 16	Last week	Last year
Average price of 20 representative railway stocks..	76.63	85.28	131.27
Average price of 20 representative railway bonds..	89.44	91.13	93.05

Dividends Declared

Albany & Susquehanna.—4½ per cent, payable January 1 to holders of record December 15; Special, 2 per cent, payable January 3 to holders of record December 15.

Baltimore & Ohio.—Common, 1¾ per cent, quarterly; Preferred, 1 per cent, quarterly, both payable March 2 to holders of record January 17.

Beech Creek.—$.50, quarterly, payable January 2 to holders of record December 15.

Chicago, Indianapolis & Louisville.—Common, 3½ per cent; Preferred, 2 per cent, both payable January 10 to holders of record December 26.

Indiana Harbor Belt.—5 per cent; Extra, 10 per cent, both payable December 26 to holders of record December 19.

Mahoning Coal R.R.—Common, $12.50, quarterly; payable February 2 to holders of record January 15; Preferred, $1.25, payable January 2 to holders of record December 23.

Mobile & Ohio.—3½ per cent; Extra, 5 per cent; both payable December 30 to holders of record December 22.

New York Central.—2 per cent, quarterly, payable February 2 to holders of record December 27 to January 28.

New York & Harlem.—Common and Preferred, $2.50, payable January 2 to holders of record December 15.

Pittsburgh, McKeesport & Youghiogheny.—$1.50, payable January 2 to holders of record December 15.

Southern.—Common, 2 per cent, quarterly, payable February 2 to holders of record January 2; Common, 2 per cent, quarterly, payable May 1 to holders of record April 1; Common, $1.65, quarterly, payable August 1 to holders of record July 1.

Railway Officers

Executive

Charles S. Millard, general manager of the Cleveland, Cincinnati, Chicago & St. Louis, has been elected vice-president and general manager, with headquarters as before at Cincinnati, Ohio. **Harry A. Worcester,** vice-president of the Big Four at Cincinnati, has been appointed vice-president of the New York Central Lines, resident at that point. Mr. Millard, as a railway engineer and as an operating officer, has been in railroad service for 33 years. He was born at Louisville, Ky., on May 3, 1874, and graduated from the Sheffield Scientific School of Yale University in 1896. In the same year he became a rodman on the Pennsylvania, and in 1897 he was appointed an assistant in the engineering

Charles S. Millard

department of the Peoria & Eastern, being advanced to assistant engineer in 1898. Following several months service in the Spanish-American war Mr. Millard returned to the Peoria & Eastern as engineer maintenance of way in October, 1899. In 1901 he was appointed second assistant engineer of the Delaware, Lackawanna & Western, returning to the Middle West as engineer, maintenance of way, of the Peoria & Pekin Union later in the same year. From 1902 to 1924 he served successively as assistant engineer on the Illinois Central at Memphis, Tenn., and as engineer, maintenance of way, engineer of track and roadway, superintendent of the Michigan and of the Chicago divisions of the Big Four, superintendent of the Peoria & Eastern, and superintendent of the St. Louis division and assistant general superintendent of the Big Four. Mr. Millard was promoted to general manager of the Big Four in April, 1924, his election as vice-president and general manager becoming effective on December 15.

Harry L. Worman, superintendent of motive power of the St. Louis-San Francisco, with headquarters at Springfield, Mo., has been elected vice-president in charge of operation, with headquarters at St. Louis, Mo., effective January 1. Mr. Worman succeeds **James E. Hutchison,** who retires on that date under the pension rules of the company. While Mr. Hutchison retires from active duty as vice-president, he will retain a connection with the Frisco as special representative of the president, with headquarters at Springfield, handling such duties as may be assigned to him.

Mr. Worman has been in railway service for 32 years, 25 of which have been in the mechanical department of the Frisco. He was born at Salem, Ohio, on July 19, 1881, and obtained his first railroad experience as a roundhouse helper on the Kansas City Southern at Kansas City, Mo., in 1898. Later in the same year he became a machinist apprentice and in 1902 was advanced to machinist, leaving the Kansas City Southern in 1903 to become a pressman for the Kansas City Star. He entered Frisco service in 1905 as a machinist at Kansas City, then serving successively on that road as roundhouse foreman at Kansas City, erecting foreman, ma-

Harry L. Worman

chine foreman and general foreman at Scott, Kan., and traveling roundhouse foreman and master mechanic at Memphis, Tenn. In 1919 Mr. Worman was promoted to assistant superintendent of motive power, with headquarters at Springfield, his further promotion to superintendent of motive power becoming effective in November, 1920.

Mr. Hutchison began his railway career at the age of 13 years as a telegraph operator on the Chicago & Alton. He was born at Washburn, Ill., in 1860. After three years as a telegraph operator he was advanced to train dispatcher and from 1879 to 1903 he served successively in various capacities on the Alton, the Denver & Rio Grande and the Union Pacific, including those of dispatcher, chief dispatcher and train-

master. In 1903 he became a dispatcher on the Frisco and in the following year he was advanced to superintendent of terminals at Kansas City. From June, 1906, to August, 1907, he was also super-

James E. Hutchison

intendent of the Northern division, with headquarters at Fort Scott, then being promoted to general superintendent of the First district. Two years later he was transferred to the Second district and on March 1, 1920, he was promoted to general manager, with headquarters at Springfield. Mr. Hutchison had been vice-president in charge of operation since January 1, 1924.

Financial, Legal and Accounting

E. A. McCrary, assistant tax commissioner of the Northern Pacific at Seattle, Wash., has been promoted to tax commissioner, with headquarters at St. Paul, Minn., succeeding **M. T. Sanders,** deceased. Mr. McCrary entered the service of the Northern Pacific in July, 1907, as clerk in the tax department. Later he was appointed chief

E. A. McCrary

clerk in that department at St. Paul and in January, 1914, was advanced to tax agent at Helena, Mont. After serving for 12 years in that capacity he was promoted to assistant tax commissioner at Seattle on June 1, 1926, a position he held until his further promotion to tax commissioner, having charge of all taxation matters affecting the Northern Pacific.

Operating

J. W. Devins, superintendent of the Railway Transfer Company of Minneapolis, Minn., has been appointed acting superintendent of the Central division of the Minneapolis & St. Louis, with headquarters at Fort Dodge, Iowa, succeeding **C. A. Hodgman,** who was granted a leave of absence on December 15. **A. A. Fox** has been appointed acting superintendent of the Railway Transfer Company, temporarily succeeding Mr. Devins.

Paul K. Partee, assistant superintendent of the Baltimore & Ohio at Baltimore, Md., was promoted to superintendent on December 1, as announced in *Railway Age* of December 6, page 1253. Mr. Partee was born on June 15, 1895, at Adelphia, Ohio, and received

Paul K. Partee

his education in the public schools of his native state. He entered railroad service on August 1, 1914, with the B. & O., serving for a month as clerk dispatcher at Chillicothe and until March 31, 1916, as a stenographer. On the latter date he was appointed secretary to the superintendent at Dayton, Ohio. From 1917 to 1919 he was engaged in military duty, returning to the B. & O. on May 12, 1919, as secretary to the general superintendent at Cleveland, Ohio. From April to June, 1923, he was night yard-master at Canton, Ohio, and on the latter date he was transferred to Parkersburg, W. Va., serving successively at that point as assistant general yardmaster, general yardmaster and terminal trainmaster. On March 4, 1929, he was promoted to assistant superintendent at Baltimore, the position he relinquished to become superintendent.

Traffic

H. G. Schaeffer has been appointed coal freight agent of the Chicago & Eastern Illinois, with headquarters at Chicago, succeeding **A. T. Allen** deceased.

John H. Carroll, Jr., freight traffic manager on the Eastern lines of the Baltimore & Ohio at Pittsburgh, Pa., has been transferred to the Western lines at Chicago, succeeding **Stuart A. Allen,** who has been granted a leave of absence because of ill health. **C. H. Pumphrey** has been appointed freight traffic manager at Pittsburgh, to succeed Mr. Carroll.

Mechanical

H. E. Bergstrom, acting shop superintendent on the Northern Pacific at Brainerd, Minn., has been promoted to shop superintendent at that point, succeeding **J. P. Anderson,** deceased.

J W. Surles, assistant superintendent of motive power of the St. Louis-San Francisco, has been promoted to superintendent of motive power, with headquarters as before at Springfield, Mo., effective January 1. **F. G. Lister,** chief mechanical engineer, with headquarters at Springfield, has been promoted to assistant superintendent of motive power, succeeding Mr. Surles.

Obituary

Bartlett W. Blue, assistant master mechanic on the Louisville & Nashville at Lexington, Ky., died at his home in that city on December 12, following an attack of acute indigestion.

Joseph J. Clark, assistant general freight agent of the Chicago & Eastern Illinois, with headquarters at Chicago, died on December 13 in that city, at the age of 47 years.

W. J. Boyle, who retired from active service as general agent in the passenger department of the Chicago, Milwaukee, St. Paul & Pacific, at Milwaukee, Wis., died at his home there on December 12, at the age of 87 years.

Alfred E. Kirkland, assistant superintendent of sleeping and dining cars of the Western lines of the Chicago, Milwaukee, St. Paul & Pacific, with headquarters at Tacoma, Wash., died at his home in that city on December 16.

George A. Keller, formerly superintendent of car service of the Delaware & Hudson, died suddenly at his home in East Greenbush, N. Y., on December 10. Mr. Keller, who was born in Poughkeepsie, N. Y., on November 1, 1856, had been in the employ of the Delaware & Hudson since March, 1881, serving as car accountant from January 1, 1888, to January 1, 1902, and as superintendent of car service from the latter date until June 15, 1914. Since that time he had been engaged on special assignments. Mr. Keller was also active in the work of the Eastern Association of Car Service Officers, and served as president of that association for the term 1902-1903.